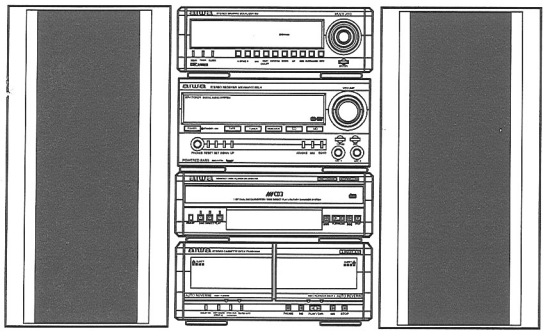
aiwa

aiwa SERVICE

XR-H1100
XR-AVH1200

SERVICE MANUAL



COMPACT DISC STEREO SYSTEM

- BASIC TAPE MECHANISM : 2ZM–3MK2 PR4NM
- BASIC CD MECHANISM : 4ZG–1 Z3NDSHM
- TYPE :EZ, K, HR

REVISION PUBLISHING

SYSTEM	AMPLIFIER	GRAPHIC EQUALIZER	CASSETTE DECK	CD PLAYER	SPEAKERS	REMOTE CONTROL
XR-H1100	MX-NH1100	GE-NH1100	FX-NH1100	DX-NH1100	SX-NAVH1200	RC-ZAS04
XR-AVH1200	MX-NAVH1200	GE-NAVH1200			SX-NAVH1200 SX-CR677	

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" XR-H1100 (EZ,K,HR), S/M Code No. 09-994-411-6T1, XR-AVH1200 (HR), S/M Code No. 09-995-411-7T1 and XR-AVH1200 (EZ,K), S/M Code No. 09-996-411-7T2.
- If requiring information about the CD mechanism, see Service Manual of 4ZG-1 (S/M Code No.09-992-325-4N2).

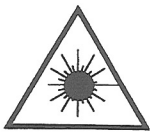
S/M Code No. 09–996–411–6R1

TABLE OF CONTENTS

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



■ Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
■ Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!
Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

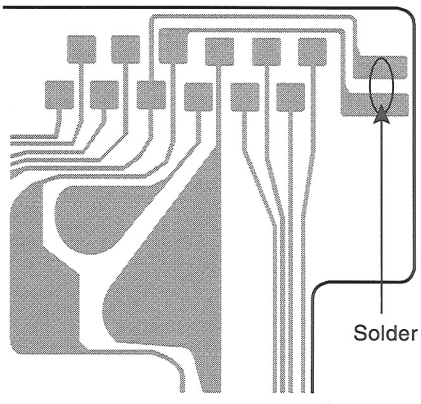
Precaution to replace Optical block

(KSS – 213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.

PICK-UP Assy P.C.B



SPECIFICATIONS <XR-H1100>

<STEREO RECEIVER MX-NH1100>

<FM tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	EZ,K: 16.8 dBf HR: 13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<MW Tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<LW Tuner section><EZ,K>

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 µV/m
Antenna	Loop antenna

<SW Tuner section><HR>

Tuning range	5.900 MHz to 17.900 MHz
Antenna	Wire antenna

<Amplifier section>

Power output	Rated: 65 W + 65 W EZ,K: (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500) HR: (1 kHZ, T.H.D. 1 %, 6 ohms) Reference: 80 W + 80 W EZ,K: (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324) HR: (1 kHZ, T.H.D. 10 %, 6 ohms) EZ,K: DIN MUSIC POWER: 145 W + 145 W
Total harmonic distortion	0.1 % (8 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX: 310 mV (adjustable) MD: 310 mV (adjustable) MIC 1, MIC 2: 1.2 mV (10 kohms)
Outputs	LINE OUT: 175 mV SPEAKERS: accept speakers of 6 ohms or more SURROUND SPEAKERS: accept speakers of 8 ohms to 16 ohms PHONES (stereo jack): accepts headphones of 32 ohms or more

<General>

Power requirements	EZ: 230 V AC, 50 Hz K: 230–240 V AC, 50 Hz HR: 120 V/ 220V–230V/ 240 V AC switchable 50/60 Hz
Power consumption	135 W
Dimensions of main unit (W x H x D)	284 x 122 x 337 mm
Weight of main unit	5.9 kg

<CASSETTE DECK FX-NH1100>

Track format	4 tracks, 2 channels stereo
Frequency response	Type II (high/CrO_2) tape: 50 Hz – 16000 Hz Type I (normal) tape: 50 Hz – 15000 Hz
Signal-to-noise ratio	60 dB (Dolby B NR ON, Type II tape peak level)
Recording system	AC bias, AC erase
Heads	Deck 1: Playback head x 1 Deck 2: Recording/playback head x 1, erase head x 1
Dimensions of main unit (W x H x D)	284 x 122 x 315 mm
Weight of main unit	2.0 kg

<CD PLAYER DX-NH1100>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable
Dimensions of main unit (W x H x D)	284 x 101 x 315 mm
Weight of main unit	2.3 kg

<GRAPHIC EQUALIZER GE-NH1100>

Dimensions of main unit (W x H x D)	284x 101 x 328 mm
Weight	1.7 kg

<SPEAKER SYSTEM SX–NAVH1200>

Cabinet type	3 way (magnetic shielded type)
Speakers	Woofer: 140 mm cone type x 2 Tweeter: 60 mm cone type Super tweeter: 20 mm ceramic type
Impedance	6 ohms
Output sound pressure level	88 dB/W/m
Dimensions (W x H x D)	250 x 443 x 250 mm
Weight	EZ,K: 7.0 kg HR: 6.0 kg

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- Manufactured under license from Dolby Laboratories Licensing Corporation.
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  Under license from BBE Sound, Inc.

SPECIFICATIONS <XR-AVH1200>

<STEREO RECEIVER MX-NAVH1200>

<FM tuner section>

Tuning range 87.5 MHz to 108 MHz

Usable sensitivity (IHF) EZ,K: 16.8 dBf
HR: 13.2 dBf

Antenna terminals 75 ohms (unbalanced)

<MW Tuner section>

Tuning range 531 kHz to 1602 kHz (9 kHz step)
530 kHz to 1710 kHz (10 kHz step)

Usable sensitivity 350 µV/m

Antenna Loop antenna

<LW Tuner section><EZ,K>

Tuning range 144 kHz to 290 kHz

Usable sensitivity 1400 µV/m

Antenna Loop antenna

<SW Tuner section><HR>

Tuning range 5.900 MHz to 17.900 MHz

Antenna Wire antenna

<Amplifier section>

Power output

Front
Rated: 65 W + 65 W
EZ,K: (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500)
HR: (1 kHZ, T.H.D. 1 %, 6 ohms)
Reference: 80 W + 80 W
EZ,K: (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324)
HR: (1 kHZ, T.H.D. 10 %, 6 ohms)
EZ,K: DIN MUSIC POWER: 150 W + 150 W

Rear (Surround)
Rated: 20 W + 20 W
EZ,K: (8 ohms, T.H.D. 1 %, 1 kHz/DIN 45500) HR: (1 kHZ, T.H.D. 1 %, 8 ohms)
Reference: 25 W + 25 W
EZ,K: (8 ohms, T.H.D. 10 %, 1 kHz/DIN 45324)
HR: (1 kHZ, T.H.D. 10 %, 8 ohms)
EZ,K: DIN MUSIC POWER: 46 W + 46 W

Center
Rated: 20 W
EZ,K: (8 ohms, T.H.D. 1 %, 1 kHz/DIN 45500)
HR: (1 kHZ, T.H.D. 1 %, 8 ohms)
Reference: 25 W
EZ,K: (8 ohms, T.H.D. 10 %, 1 kHz/DIN 45324)
HR: (1 kHZ, T.H.D. 10 %, 8 ohms)
EZ,K: DIN MUSIC POWER: 46 W

Total harmonic distortion EZ,K: 0.1 % (8 W, 1 kHz, 6 ohms, DIN AUDIO/Front)
HR: 0.1 % (8 W, 1 kHz, 6 ohms, DIN AUDIO)

Inputs VIDEO/AUX: 310 mV (adjustable)
MD: 310 mV (adjustable)
MIC 1, MIC 2: 1.2 mV (10 kohms)
5.1CH INPUT
FRONT (L,R): 400 mV
SURROUND (L,R): 400 mV
CENTER: 400 mV
SUB WOOFER: 400 mV

Outputs LINE OUT: 175 mV
SUB WOOFER<EZ,K>: 1V
SPEAKERS: accept speakers of 6 ohms or more
SURROUND SPEAKERS: accept speakers of 8 ohms to 16 ohms
CENTER SPEAKER<EZ,K>: accept speakers of 8 ohms or more
PHONES (stereo jack): accepts headphones of 32 ohms or more

<General>

Power requirements EZ,K: 230 V AC, 50 Hz
HR: 120 V/ 220V–230V/ 240 V AC switchable 50/60 Hz

Power consumption EZ,HR: 155 W K: 160 W

Dimensions of main unit (W x H x D) 284 x 122 x 387 mm

Weight of main unit 5.9 kg

<CASSETTE DECK FX-NH1100>

Track format 4 tracks, 2 channels stereo

Frequency response Type II (high/CrO_2) tape:
50 Hz – 16000 Hz
Type I (normal) tape:
50 Hz – 15000 Hz

Signal-to-noise ratio 60 dB (Dolby B NR ON, Type II tape peak level)

Recording system AC bias, AC erase

Heads Deck 1: Playback head x 1
Deck 2: Recording/playback head x 1, erase head x 1

Dimensions of main unit (W x H x D) 284 x 122 x 315 mm

Weight of main unit 2.0 kg

<CD PLAYER DX-NH1100>

Laser Semiconductor laser (λ =780 nm)

D-A converter 1 bit dual

Signal-to-noise ratio 85 dB (1 kHz, 0 dB)

Harmonic distortion 0.05 % (1 kHz, 0 dB)

Wow and flutter Unmeasurable

Dimensions of main unit (W x H x D) 284 x 101 x 315 mm

Weight of main unit 2.3 kg

<GRAPHIC EQUALIZER GE-NAVH1200>

Dimensions of main unit (W x H x D) 284x 101 x 328 mm

Weight 1.7 kg

<SPEAKER SYSTEM SX–NAVH1200>

Cabinet type 3 way (magnetic shielded type)

Speakers Woofer:
140 mm cone type x 2
Tweeter:
60 mm cone type
Super tweeter:
20 mm ceramic type

Impedance 6 ohms

Output sound pressure level 88 dB/W/m

Dimensions (W x H x D) 250 x 443 x 250 mm

Weight EZ,K: 7.0 kg
HR: 6.0 kg

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  Under license from BBE Sound, Inc.

MODEL NO.

MX-NH1100/NAVH1200

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8Z-SP1-605-010		IC,UPD780228GF-034-3BA
	87-A20-914-010		IC,SPS-442-1-F
	87-A21-202-040		C-IC,M62445AFP
	87-A20-804-040		C-IC,NJM2152M
	87-017-888-080		IC,NJM4558MD
	87-A20-869-040		C-IC,M62449FP
	87-070-127-110		IC,LC72131 D
	87-A20-913-010		IC,LA1837NL
	87-A21-051-040		C-IC,BU9990-03FS
	87-A21-097-040		C-IC,M62463AFP<1200>
	87-A21-015-040		C-IC,M62491FP<1200>
	87-A21-018-040		C-IC,M65849BFP631D
	87-A20-440-040		C-IC,BU1920FS
TRANSISTOR			
	87-026-245-080		TR,DTC114ES
	87-026-610-080		TR,KTC3198GR
	87-A30-076-080		C-TR,2SC3052F
	87-A30-083-080		TR,CSD1489B
	87-A30-075-080		C-TR,2SA1235F
	87-026-609-080		TR,KTA1266GR
	89-213-702-010		TR,2SB1370 (1.8W)
	87-A30-087-080		C-FET,2SK2158
	87-A30-257-080		C-TR,2SD1306E
	87-A30-268-040		C-TR,2SA1514K(S)
	87-A30-190-080		TR,CC5551
	87-A30-071-080		C-TR,RT1N 144C
	87-A30-106-070		C-TR,CMBT5551
	87-A30-072-080		C-TR,RT1P 144C
	87-A30-073-080		C-TR,RT1N 141C
	87-A30-074-080		C-TR,RT1P 141C
	87-026-263-080		C-TR,RN1410
	89-333-266-080		C-TR,2SC3326B
	89-112-965-080		TR,2SA1296 (0.75W)
	87-026-226-080		CHIP-TR,DTA143EK
	87-A30-196-080		TR,2SC4115SRS
	89-327-143-080		TR,2SC2714 (0.1W)
	87-A30-086-070		C-TR,CSD1306E
	89-503-602-080		C-FET,2SK360E
	87-A30-108-010		TR,2SB1626
	87-A30-109-010		TR,2SD2495
	87-A30-186-010		FET,2SK3053
	87-A30-137-010		TR,2SD2494
	87-A30-138-010		TR,2SB1625
DIODE			
	87-070-274-080		DIODE,1N4003 SEM
	87-A40-547-090		DIODE,D5SBA20
	87-017-447-010		DIODE,GBU4DL
	87-020-465-080		DIODE,1SS133 (110MA)
	87-A40-468-080		C-DIODE,HSM2836CTR
	87-A40-469-080		C-DIODE,HSM2838CTR
	87-A40-435-080		ZENER,MTZJ30D
	87-A40-345-080		ZENER,MTZJ10C
	87-A40-004-080		ZENER,MTZJ16A
	87-070-345-080		DIODE,IN4148
	87-017-931-080		ZENER,MTZJ5.6B
	87-A40-370-090		DIODE,RK46-P20
	87-070-136-080		ZENER,MTZJ5.1B
	87-A40-488-080		DIODE,1SS244
	87-A40-438-080		ZENER,MTZJ4.7A
	87-A40-002-080		ZENER,MTZJ5.1C
	87-A40-234-080		ZENER,MTZJ5.6A
	87-A40-442-080		ZENER,MTZJ9.1A
	87-A40-270-080		C-DIODE MC2838
	87-A40-500-080		ZENER,MTZJ30B
MAIN C.B			
C101	87-010-917-090		CAP,E 3300-50 M SMG
C102	87-010-917-090		CAP,E 3300-50 M SMG
C103	87-016-658-090		CAP,E 4700-35 SMG
C104	87-016-658-090		CAP,E 4700-35 SMG
C105	87-012-368-080		C-CAP,S 0.1-50 F
C106	87-012-368-080		C-CAP,S 0.1-50 F
C107	87-012-368-080		C-CAP,S 0.1-50 F
C108	87-012-368-080		C-CAP,S 0.1-50 F
C109	87-010-196-080		CHIP CAPACITOR,0.1-25
C110	87-010-196-080		CHIP CAPACITOR,0.1-25
C111	87-010-196-080		CHIP CAPACITOR,0.1-25
C112	87-010-196-080		CHIP CAPACITOR,0.1-25
C113	87-010-247-080		CAP, ELECT 100-50V
C114	87-010-385-080		CAP, ELECT 220-25V
C115	87-010-385-080		CAP, ELECT 220-25V
C116	87-010-247-080		CAP, ELECT 100-50V
C117	87-010-430-080		CAP, ELECT 100-63
C118	87-010-263-080		CAP, ELECT 100-10V
C119	87-010-260-080		CAP, ELECT 47-25V
C120	87-010-403-080		CAP, ELECT 3.3-50V
C121	87-010-174-080		CAP CHIP SL470P (K)
C122	87-010-403-080		CAP, ELECT 3.3-50V
C123	87-010-247-080		CAP, ELECT 100-50V
C124	87-010-112-080		CAP, ELECT 100-16V
C125	87-010-235-080		CAP,E 470-16 SME
C130	87-010-399-090		CAP,E 3300-35 SME<1200>
C131	87-010-399-090		CAP,E 3300-35 SME<1200>
C132	87-012-368-080		C-CAP,S 0.1-50 F<1200>
C133	87-012-368-080		C-CAP,S 0.1-50 F<1200>
C190	87-010-196-080		CHIP CAPACITOR,0.1-25
C201	87-010-322-080		C-CAP,S 100P-50 CH
C202	87-010-322-080		C-CAP,S 100P-50 CH
C209	87-010-405-080		CAP, ELECT 10-50V
C210	87-010-405-080		CAP, ELECT 10-50V
C211	87-010-183-080		C-CAP,S 2700P-50 B
C212	87-010-183-080		C-CAP,S 2700P-50 B
C213	87-010-187-080		CAP CHIP S5600P
C214	87-010-187-080		CAP CHIP S5600P
C215	87-010-405-080		CAP, ELECT 10-50V
C216	87-010-405-080		CAP, ELECT 10-50V
C217	87-010-408-080		CAP, ELECT 47-50V
C218	87-010-408-080		CAP, ELECT 47-50V
C219	87-A10-516-080		C-CAP,S 100P-200 J CH
C220	87-A10-516-080		C-CAP,S 100P-200 J CH
C221	87-016-462-080		C-CAP,S 1-16 F
C222	87-016-462-080		C-CAP,S 1-16 F
C223	87-010-405-080		CAP, ELECT 10-50V
C226	87-010-405-080		CAP, ELECT 10-50V
C227	87-010-407-080		CAP, ELECT 33-50V
C229	87-010-407-080		CAP, ELECT 33-50V
C230	87-010-408-080		CAP, ELECT 47-50V
C231	87-010-186-080		CAP,CHIP 4700P
C232	87-010-186-080		CAP,CHIP 4700P
C233	87-010-401-080		CAP, ELECT 1-50V
C234	87-010-401-080		CAP, ELECT 1-50V
C235	87-010-196-080		CHIP CAPACITOR,0.1-25

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C290	87-010-188-080		CAP,CHIP 6800P
C301	87-010-402-080		CAP, ELECT 2.2-50V<1200>
C302	87-010-402-080		CAP, ELECT 2.2-50V<1200>
C303	87-010-178-080		CHIP CAP 1000P<1200>
C304	87-010-178-080		CHIP CAP 1000P<1200>
C305	87-010-404-080		CAP, ELECT 4.7-50V<1200>
C306	87-010-404-080		CAP, ELECT 4.7-50V<1200>
C307	87-010-322-080		C-CAP,S 100P-50 CH<1200>
C308	87-010-322-080		C-CAP,S 100P-50 CH<1200>
C309	87-010-405-080		CAP, ELECT 10-50V<1200>
C310	87-010-405-080		CAP, ELECT 10-50V<1200>
C313	87-010-260-080		CAP, ELECT 47-25V<1200>
C314	87-010-260-080		CAP, ELECT 47-25V<1200>
C315	87-A10-596-080		C-CAP,S 100P-100 J CH<1200>
C316	87-A10-596-080		C-CAP,S 100P-100 J CH<1200>
C317	87-010-544-080		CAP, ELECT 0.1-50V<1200>
C318	87-010-544-080		CAP, ELECT 0.1-50V<1200>
C319	87-010-182-080		C-CAP,S 2200P-50 B<1200>
C321	87-012-145-080		CAP, CHIP S 270P CH<1200>
C322	87-012-145-080		CAP, CHIP S 270P CH<1200>
C323	87-016-462-080		C-CAP,S 1-16 F<1200>
C324	87-016-462-080		C-CAP,S 1-16 F<1200>
C351	87-010-402-080		CAP, ELECT 2.2-50V<1200>
C352	87-010-178-080		CHIP CAP 1000P<1200>
C353	87-010-404-080		CAP, ELECT 4.7-50V<1200>
C354	87-010-322-080		C-CAP,S 100P-50 CH<1200>
C355	87-010-405-080		CAP, ELECT 10-50V<1200HR>
C355	87-010-404-080		CAP, ELECT 4.7-50V<1200EZ,K>
C357	87-010-260-080		CAP, ELECT 47-25V<1200>
C358	87-A10-596-080		C-CAP,S 100P-100 J CH<1200>
C359	87-010-544-080		CAP, ELECT 0.1-50V<1200>
C360	87-012-145-080		CAP, CHIP S 270P CH<1200>
C361	87-016-462-080		C-CAP,S 1-16 F<1200>
C381	87-010-402-080		CAP, ELECT 2.2-50V<1200>
C391	87-010-260-080		CAP, ELECT 47-25V<1200>
C503	87-010-180-080		C-CER 1500P
C504	87-010-180-080		C-CER 1500P
C511	87-010-405-080		CAP, ELECT 10-50V
C512	87-010-405-080		CAP, ELECT 10-50V
C513	87-010-404-080		CAP, ELECT 4.7-50V
C514	87-010-404-080		CAP, ELECT 4.7-50V
C519	87-012-142-080		CAP, S 0.33-16
C520	87-016-669-080		C-CAP,S 0.1-25 K B
C521	87-016-083-080		C-CAP,S 0.15-16 RK
C522	87-010-183-080		C-CAP,S 2700P-50 B
C523	87-016-669-080		C-CAP,S 0.1-25 K B
C525	87-010-404-080		CAP, ELECT 4.7-50V
C526	87-010-404-080		CAP, ELECT 4.7-50V
C531	87-010-405-080		CAP, ELECT 10-50V
C532	87-010-263-080		CAP, ELECT 100-10V
C533	87-010-263-080		CAP, ELECT 100-10V
C534	87-010-406-080		CAP, ELECT 22-50
C535	87-010-195-080		C-CAP,S 0.068-25 F
C536	87-012-142-080		CAP, S 0.33-16
C537	87-010-196-080		CHIP CAPACITOR,0.1-25
C538	87-010-404-080		CAP, ELECT 4.7-50V
C539	87-010-404-080		CAP, ELECT 4.7-50V
C540	87-010-320-080		CHIP CAP 68P
C541	87-010-320-080		CHIP CAP 68P
C542	87-010-320-080		CHIP CAP 68P
C545	87-010-196-080		CHIP CAPACITOR,0.1-25
C547	87-010-401-080		CAP, ELECT 1-50V
C548	87-010-401-080		CAP, ELECT 1-50V
C601	87-010-401-080		CAP, ELECT 1-50V
C602	87-010-401-080		CAP, ELECT 1-50V
C603	87-010-182-080		C-CAP,S 2200P-50 B
C604	87-010-182-080		C-CAP,S 2200P-50 B
C605	87-010-369-080		C-CAP,S 0.033-25 K B
C606	87-010-369-080		C-CAP,S 0.033-25 K B
C607	87-010-405-080		CAP, ELECT 10-50V
C608	87-010-405-080		CAP, ELECT 10-50V
C609	87-010-374-080		CAP, ELECT 47-10V
C610	87-010-374-080		CAP, ELECT 47-10V
C611	87-010-405-080		CAP, ELECT 10-50V
C612	87-010-112-080		CAP, ELECT 100-16V
C613	87-010-173-080		C-CAP,S 390P-50 SL
C614	87-010-173-080		C-CAP,S 390P-50 SL
C668	87-010-190-080		S CHIP F 0.01
C701	87-010-402-080		CAP, ELECT 2.2-50V
C702	87-010-402-080		CAP, ELECT 2.2-50V
C703	87-016-669-080		C-CAP,S 0.1-25 K B
C704	87-016-669-080		C-CAP,S 0.1-25 K B
C705	87-016-460-080		C-CAP,S 0.22-16 B
C706	87-016-460-080		C-CAP,S 0.22-16 B
C707	87-012-365-080		C-CAP,S 0.027-25VBK
C708	87-012-365-080		C-CAP,S 0.027-25VBK
C709	87-010-956-080		CHIP-CAP,S 0.068-25B
C710	87-010-956-080		CHIP-CAP,S 0.068-25B
C711	87-010-197-080		CAP, CHIP 0.01 DM
C712	87-010-197-080		CAP, CHIP 0.01 DM
C713	87-010-198-080		CAP, CHIP 0.022
C714	87-010-198-080		CAP, CHIP 0.022
C715	87-010-183-080		C-CAP,S 2700P-50 B
C716	87-010-183-080		C-CAP,S 2700P-50 B
C717	87-010-188-080		CAP,CHIP 6800P
C718	87-010-188-080		CAP,CHIP 6800P
C719	87-010-178-080		CHIP CAP 1000P
C720	87-010-178-080		CHIP CAP 1000P
C721	87-010-182-080		C-CAP,S 2200P-50 B
C722	87-010-182-080		C-CAP,S 2200P-50 B
C730	87-010-404-080		CAP, ELECT 4.7-50V
C731	87-010-112-080		CAP, ELECT 100-16V
C735	87-010-322-080		C-CAP,S 100P-50 CH
C736	87-010-322-080		C-CAP,S 100P-50 CH
C737	87-010-322-080		C-CAP,S 100P-50 CH
C738	87-010-196-080		CHIP CAPACITOR,0.1-25
C900	87-010-178-080		CHIP CAP 1000P<1200>
C901	87-010-182-080		C-CAP,S 2200P-50 B
C902	87-010-182-080		C-CAP,S 2200P-50 B
C903	87-010-196-080		CHIP CAPACITOR,0.1-25
C904	87-010-196-080		CHIP CAPACITOR,0.1-25
C905	87-010-196-080		CHIP CAPACITOR,0.1-25
C906	87-010-196-080		CHIP CAPACITOR,0.1-25
C907	87-010-190-080		S CHIP F 0.01
C908	87-010-190-080		S CHIP F 0.01
C909	87-012-368-080		C-CAP,S 0.1-50 F
C910	87-012-368-080		C-CAP,S 0.1-50 F
C911	87-010-190-080		S CHIP F 0.01
C912	87-010-190-080		S CHIP F 0.01<1200>
C913	87-010-182-080		C-CAP,S 2200P-50 B<1200>
C914	87-010-190-080		S CHIP F 0.01<1200(EZ,K)>
C915	87-010-190-080		S CHIP F 0.01<1200(EZ,K)>
C916	87-010-190-080		S CHIP F 0.01<1200(EZ,K)>
C917	87-010-190-080		S CHIP F 0.01<1200(EZ,K)>
C920	87-012-157-080		C-CAP,S 330P-50 CH
C921	87-012-157-080		C-CAP,S 330P-50 CH
C922	87-012-157-080		C-CAP,S 330P-50 CH
C923	87-012-157-080		C-CAP,S 330P-50 CH
C924	87-012-157-080		C-CAP,S 330P-50 CH<EZ,K>
C925	87-012-157-080		C-CAP,S 330P-50 CH<EZ,K>
C941	87-010-196-080		CHIP CAPACITOR,0.1-25<1200>
C942	87-010-196-080		CHIP CAPACITOR,0.1-25<1200>
C943	87-010-993-080		C-CAP,S 0.056-25 B<1200>
C944	87-010-993-080		C-CAP,S 0.056-25 B<1200>
C945	87-010-196-080		CHIP CAPACITOR,0.1-25<1200>
C946	87-010-993-080		C-CAP,S 0.056-25 B<1200>
C951	87-010-401-080		CAP, ELECT 1-50V
C952	87-010-263-080		CAP, ELECT 100-10V
C953	87-010-380-080		CAP, ELECT 47-16V
CN121	87-049-919-010		CONN,3P EH V WHT
CN123	87-049-469-010		CONN,4P V
CN131	87-049-919-010		CONN,3P EH V WHT<1200>
CN601	87-099-196-010		CONN,8P 6216V<1100>
CN611	87-099-194-010		CONN,6P 6216V<1200>
CN621	87-A60-063-010		CONN,4P V 9604S-04C<EZ,K>
CN901	87-099-719-010		CONN,30P TYK-B(X)
CN902	87-009-877-010		CONN,9P FG
CN903	87-009-063-010		CONNECTOR 11P
CN906	87-A60-058-010		CONN,10P V 9604S-10C
CN907	87-A60-057-010		CONN,11P V 9604S-11C
CN951	87-A60-109-010		CONN,2P V S2M-2W
FB179	87-008-372-080		FILTER,EMI BL OIRNI<1200(EZ,K)>
FB501	87-003-223-010		FERRITE BEAD BLO2RN2
FB503	87-008-372-080		FILTER,EMI BL OIRNI<1200(EZ,K)>
FB504	87-008-372-080		FILTER,EMI BL OIRNI<1200(EZ,K)>
FB901	87-008-372-080		FILTER,EMI BL OIRNI
FB902	87-008-372-080		FILTER,EMI BL OIRNI<1200(EZ,K)>
FB903	87-008-372-080		FILTER,EMI BL OIRNI<1200(EZ,K)>
J901	87-A60-483-010		JACK,DIA6.3 BLK ST W/S KM<1200>
J902	87-A60-617-010		TERMINAL,SP 4P (MSC)
J903	87-A60-653-010		JACK,PIN 4P BLK/BLK<1100>
J903	87-A60-652-010		JACK,PIN 4P ORN/BLK<1200>
J904	87-A60-684-010		JACK,PIN 6P OR/BLK/RED<1200>
J905	87-A60-658-010		JACK,PIN 6P WHITE/RED
L601	87-005-372-080		COIL,1MH-K LALO3<EZ,K>
L602	87-005-372-080		COIL,1MH-K LALO3<EZ,K>
L901	87-003-383-010		COIL,1UH-S
L902	87-003-383-010		COIL,1UH-S
L911	87-003-383-010		COIL,1UH-S<1200>
L912	87-003-383-010		COIL,1UH-S<1200>
L913	87-003-383-010		COIL,1UH-S<1200>
PIN611	87-099-570-010		CONN,13P TUC-P13P-B1<1200>
PIN612	87-099-568-010		CONN,11P TUC-P11P-B1<1200>
PR201	87-002-330-080		ICP-N5
R237	87-A00-262-080		RES,M/F 0.15-2W J
R238	87-A00-262-080		RES,M/F 0.15-2W J
R239	87-A00-262-080		RES,M/F 0.15-2W J
R240	87-A00-262-080		RES,M/F 0.15-2W J
R331	87-022-050-080		RES,M/F 0.22-1W J<1200>
R332	87-022-050-080		RES,M/F 0.22-1W J<1200>
R333	87-022-050-080		RES,M/F 0.22-1W J<1200>
R334	87-022-050-080		RES,M/F 0.22-1W J<1200>
R366	87-022-050-080		RES,M/F 0.22-1W J<1200>
R367	87-022-050-080		RES,M/F 0.22-1W J<1200>
R807	87-022-214-080		C-RES S100K-1/10WF<1200>
R909	87-A00-440-050		RES,220-1/2W J RP
R910	87-A00-440-050		RES,220-1/2W J RP
R911	87-A00-440-050		RES,220-1/2W J RP
R912	87-A00-440-050		RES,220-1/2W J RP
R913	87-A00-527-080		RES,10-1/4W J NAT
R914	87-A00-527-080		RES,10-1/4W J NAT
R915	87-A00-527-080		RES,10-1/4W J NAT
R916	87-A00-527-080		RES,10-1/4W J NAT
R941	87-A00-527-080		RES,10-1/4W J NAT<1200>
R942	87-A00-527-080		RES,10-1/4W J NAT<1200>
R945	87-A00-527-080		RES,10-1/4W J NAT<1200>
TH201	87-A91-081-080		C-THMS,100K-K 20P
TH202	87-A91-081-080		C-THMS,100K-K 20P
W101	8Z-SP1-627-010		F-CABLE,7P 2.5 280MM
W601	88-908-281-110		FF-CABLE,8P-1.25 280MM<1100>
W611	88-906-301-110		FF-CABLE,6P-1.25<1200>
W621	88-904-151-110		FF-CABLE,4P-1.25 150MM<1100>
W906	88-910-071-110		FF-CABLE,10P-1.25 70MM
W907	88-911-121-110		FF-CABLE,11P-1.25
WH102	87-A90-460-010		HLDR,WIRE 2.5-7P

FRONT C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C101	87-010-196-080		CHIP CAPACITOR,0.1-25
C201	87-010-192-080		C-CAP,S 0.022-50 F
C202	87-010-264-040		CAP,E 100-10 5L
C203	87-016-081-080		C-CAP,S 0.1-16 RK
C204	87-010-981-040		CAP,E 22-35 5L SRE
C205	87-010-194-080		CAP, CHIP 0.047
C206	87-010-405-040		CAP,E 10-50
C207	87-010-194-080		CAP, CHIP 0.047
C208	87-A10-189-040		CAP,E 220-10
C209	87-010-071-040		CAP,E 1-50 M 5L SRE
C211	87-012-140-080		CAP 470P
C220	87-016-669-080		C-CAP,S 0.1-25 K B
C221	87-016-669-080		C-CAP,S 0.1-25 K B
C222	87-010-401-040		CAP,E 1-50 SME
C241	87-010-178-080		CHIP CAP 1000P
C242	87-010-318-080		C-CAP,S 47P-50 CH
C243	87-010-314-080		C-CAP,S 22P-50V
C244	87-010-316-080		C-CAP,S 33P-50 CH
C247	87-016-669-080		C-CAP,S 0.1-25 K B
C248	87-010-192-080		C-CAP,S 0.022-50 F
C251	87-010-197-080		CAP, CHIP 0.01 DM
C252	87-010-197-080		CAP, CHIP 0.01 DM
C253	87-A10-189-040		CAP,E 220-10
C254	87-010-197-080		CAP, CHIP 0.01 DM
C255	87-018-134-080		CAPACITOR,TC-U 0.01-16
C301	87-010-404-040		CAP,E 4.7-50 SME
C302	87-010-404-040		CAP,E 4.7-50 SME
C340	87-010-175-080		CAP 560P
C341	87-010-175-080		CAP 560P
C342	87-010-175-080		CAP 560P
C343	87-010-175-080		CAP 560P
C344	87-010-175-080		CAP 560P
C345	87-010-175-080		CAP 560P
C346	87-010-175-080		CAP 560P
C347	87-010-175-080		CAP 560P
C348	87-010-175-080		CAP 560P
C349	87-010-175-080		CAP 560P
C601	87-010-405-040		CAP,E 10-50
C602	87-010-176-080		C-CAP,S 680P-50 SL
C603	87-010-186-080		CAP,CHIP 4700P
C604	87-010-166-080		C-CAP,S 100P-50 SL
C605	87-010-321-080		CHIP CAPACITOR,82P(J)
C606	87-010-490-040		CAP, ELECT 0.1-50
C608	87-010-166-080		C-CAP,S 100P-50 SL
C609	87-010-545-040		CAP,E 0.22-50 SME
C610	87-010-177-080		C-CAP,S 820P-50 SL
C611	87-010-981-040		CAP,E 22-35 5L SRE
C614	87-010-248-040		CAP,E 220-10 SME
C615	87-010-075-040		CAP,E 10-16 5L<1100>
C615	87-010-498-040		CAP,E 10-16 GAS<1200>
C619	87-016-526-080		C-CAP,S 0.47-16 BK
C801	87-010-170-080		S CHIP SL 220P(K)
C802	87-010-176-080		C-CAP,S 680P-50 SL
C803	87-010-187-080		CAP CHIP S5600P
C804	87-010-213-080		C-CAP,S 0.015-50 B
C806	87-010-494-040		CAP,E 1-50 GAS
C807	87-010-196-080		CHIP CAPACITOR,0.1-25
C809	87-012-155-080		C-CAP 180P-50CH
C810	87-010-264-040		CAP,E 100-10 5L
C811	87-010-552-040		CAP,E 22-16 GAS
C812	87-010-560-040		CAP,E 10-50 GAS
C821	87-010-318-080		C-CAP,S 47P-50 CH
C822	87-010-318-080		C-CAP,S 47P-50 CH
C823	87-010-318-080		C-CAP,S 47P-50 CH
C901	87-012-141-080		CHIP-CAPACITOR,0.22-16F<1100>
C902	87-012-141-080		CHIP-CAPACITOR,0.22-16F<1100>
C903	87-016-526-080		C-CAP,S 0.47-16 BK<1100>
C904	87-010-183-080		C-CAP,S 2700P-50 B<1100>
C905	87-010-176-080		C-CAP,S 680P-50 SL<1100>
C906	87-016-552-080		C-CAP,S 0.082-16 B K<1100>
C907	87-016-552-080		C-CAP,S 0.082-16 B K<1100>
C908	87-010-183-080		C-CAP,S 2700P-50 B<1100>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C909	87-010-176-080		C-CAP,S 680P-50 SL<1100>
C910	87-012-142-080		CAP, S 0.33-16<1100>
C911	87-010-196-080		CHIP CAPACITOR,0.1-25<1100>
C912	87-016-526-080		C-CAP,S 0.47-16 BK<1100>
C913	87-010-401-040		CAP,E 1-50 SME<1100>
C914	87-010-494-040		CAP,E 1-50 GAS<1100>
C915	87-010-184-080		CHIP CAPACITOR 3300P(K)<1100>
C916	87-010-184-080		CHIP CAPACITOR 3300P(K)<1100>
C917	87-010-553-040		CAP,E 47-16 GAS<1100>
C918	87-010-196-080		CHIP CAPACITOR,0.1-25<1100>
C919	87-010-264-040		CAP,E 100-10 5L<1100>
C920	87-010-318-080		C-CAP,S 47P-50 CH<1100>
C921	87-010-318-080		C-CAP,S 47P-50 CH<1100>
C922	87-010-318-080		C-CAP,S 47P-50 CH<1100>
CN101	87-099-720-010		CONN,30P TYK-B(P)
CN601	87-099-199-010		CONN,6P 6216 H<1200>
CN901	87-099-201-010		CONN,8P 6216 H<1100>
FB101	87-008-372-080		FILTER, EMI BL OIRNI
FB601	87-008-372-080		FILTER, EMI BL OIRNI
FL301	8Z-SP1-617-010		FL,10-BT-218GNK
J601	87-A60-651-010		JACK,3.5MONO
J602	87-A60-651-010		JACK,3.5MONO
L101	87-005-130-080		COIL,10UH K<1100>
L801	87-A50-093-010		COIL,CLOCK 5.76MHZ
LED201	87-A40-589-040		LED,SLR-56VCT31 RED
LED301	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED302	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED303	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED304	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED305	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED306	87-A40-589-040		LED,SLR-56VCT31 RED<1100>
LED306	87-A40-606-040		LED,SLR-332VC<1200>
LED307	87-A40-589-040		LED,SLR-56VCT31 RED<1100>
LED307	87-A40-606-040		LED,SLR-332VC<1200>
LED308	87-A40-589-040		LED,SLR-56VCT31 RED<1100>
LED308	87-A40-606-040		LED,SLR-332VC<1200>
LED309	87-A40-589-040		LED,SLR-56VCT31 RED<1100>
LED309	87-A40-606-040		LED,SLR-332VC<1200>
LED310	87-A40-589-040		LED,SLR-56VCT31 RED<1100>
LED310	87-A40-606-040		LED,SLR-332VC<1200>
S301	87-A90-095-080		SW,TACT EVQ11G04M
S302	87-A90-095-080		SW,TACT EVQ11G04M
S303	87-A90-095-080		SW,TACT EVQ11G04M
S304	87-A90-095-080		SW,TACT EVQ11G04M
S305	87-A90-095-080		SW,TACT EVQ11G04M
S306	87-A90-095-080		SW,TACT EVQ11G04M
S307	87-A90-095-080		SW,TACT EVQ11G04M
S308	87-A90-095-080		SW,TACT EVQ11G04M
S309	87-A90-095-080		SW,TACT EVQ11G04M
S310	87-A90-095-080		SW,TACT EVQ11G04M
S311	87-A90-095-080		SW,TACT EVQ11G04M
S312	87-A90-095-080		SW,TACT EVQ11G04M
S313	87-A90-095-080		SW,TACT EVQ11G04M
S314	87-A90-095-080		SW,TACT EVQ11G04M
S315	87-A90-095-080		SW,TACT EVQ11G04M
S316	87-A90-095-080		SW,TACT EVQ11G04M<EZ,K>
S317	87-A90-095-080		SW,TACT EVQ11G04M<EZ,K>
S318	87-A90-095-080		SW,TACT EVQ11G04M<EZ,K>
SW201	87-A91-342-010		SW,RTRY EC16B24104W/O D L20
X201	87-A70-075-080		VIB,CER 4.19MHZ CRHF

PRO C.B <1200>

C801	87-010-176-080		C-CAP,S 680P-50 SL
C802	87-010-176-080		C-CAP,S 680P-50 SL
C803	87-010-958-080		CHIP -CAP,S 0.01-25BJ
C804	87-010-958-080		CHIP -CAP,S 0.01-25BJ
C805	87-010-958-080		CHIP -CAP,S 0.01-25BJ
C806	87-010-958-080		CHIP -CAP,S 0.01-25BJ
C807	87-010-401-080		CAP, ELECT 1-50V
C808	87-010-401-080		CAP, ELECT 1-50V
C809	87-010-196-080		CHIP CAPACITOR,0.1-25
C810	87-010-112-080		CAP, ELECT 100-16V
C811	87-010-402-080		CAP, ELECT 2.2-50V
C812	87-010-402-080		CAP, ELECT 2.2-50V
C813	87-010-401-080		CAP, ELECT 1-50V
C814	87-010-401-080		CAP, ELECT 1-50V
C815	87-010-546-080		CAP, ELECT 0.33-50V
C816	87-010-546-080		CAP, ELECT 0.33-50V
C817	87-010-221-080		CAP, ELECT 470-10V
C818	87-A10-891-080		CAP,E 4.7-25 SME(K)
C819	87-A10-800-080		C-CAP,S 6800P-16 J B CM
C820	87-010-374-080		CAP, ELECT 47-10V
C821	87-010-196-080		CHIP CAPACITOR,0.1-25
C822	87-A10-804-080		C-CAP,S 0.1-25 J B
C823	87-A10-800-080		C-CAP,S 6800P-16 J B CM
C824	87-010-374-080		CAP, ELECT 47-10V
C825	87-010-196-080		CHIP CAPACITOR,0.1-25
C829	87-010-544-080		CAP, ELECT 0.1-50V
C830	87-010-546-080		CAP, ELECT 0.33-50V
C831	87-010-971-080		C-CAP,S 4700P-50 B J
C832	87-012-349-080		C-CAP,S 1000P-50 CH
C837	87-010-971-080		C-CAP,S 4700P-50 B J
C838	87-012-349-080		C-CAP,S 1000P-50 CH
C839	87-010-401-080		CAP, ELECT 1-50V
C840	87-010-401-080		CAP, ELECT 1-50V
C841	87-A10-799-080		C-CAP,S 5600P-16 J B CM
C842	87-A10-802-080		C-CAP,S 0.047-16 J B CM
C843	87-A10-229-080		C-CAP,S 0.68-10 K W5
C844	87-012-393-080		C-CAP,S 0.22-16 R K
C845	87-012-393-080		C-CAP,S 0.22-16 R K
C846	87-010-404-080		CAP, ELECT 4.7-50V
C847	87-010-404-080		CAP, ELECT 4.7-50V
C848	87-012-393-080		C-CAP,S 0.22-16 R K
C849	87-012-393-080		C-CAP,S 0.22-16 R K
C850	87-016-081-080		C-CAP,S 0.1-16 RK
C851	87-A10-802-080		C-CAP,S 0.047-16 J B CM
C852	87-A10-802-080		C-CAP,S 0.047-16 J B CM
C853	87-016-081-080		C-CAP,S 0.1-16 RK
C854	87-016-081-080		C-CAP,S 0.1-16 RK
C855	87-A10-801-080		C-CAP,S 0.022-16 J B CM
C856	87-A10-801-080		C-CAP,S 0.022-16 J B CM
C857	87-016-081-080		C-CAP,S 0.1-16 RK
C861	87-010-196-080		CHIP CAPACITOR,0.1-25
C863	87-010-263-080		CAP, ELECT 100-10V
C865	87-016-460-080		C-CAP,S 0.22-16 B
C866	87-010-194-080		CAP, CHIP 0.047
C867	87-A10-201-080		C-CAP,S0.33-16 KB
C868	87-A10-060-080		C-CAP,S 0.18-16 K B
C878	87-010-401-080		CAP, ELECT 1-50V
C879	87-010-179-080		CAP,CHIP S B1200P
C880	87-010-179-080		CAP,CHIP S B1200P
C890	87-012-358-080		C-CAP,S 0.47-10 F Z
C891	87-010-401-080		CAP, ELECT 1-50V
C892	87-010-401-080		CAP, ELECT 1-50V
C893	87-010-401-080		CAP, ELECT 1-50V
C894	87-010-263-080		CAP, ELECT 100-10V
C895	87-010-195-080		C-CAP,S 0.068-25 F
C896	87-010-260-080		CAP, ELECT 47-25V
CN401	87-099-559-010		CONN,13P TUC-P13X-B1<1200>
CN402	87-099-557-010		CONN,11P TUC-P11X-B1<1200>

TUNER C.B

C701	87-010-260-080		CAP, ELECT 47-25V
C702	87-010-404-080		CAP, ELECT 4.7-50V
C703	87-012-286-080		CAP, U 0.01-25
C704	87-012-286-080		CAP, U 0.01-25
C709	87-012-195-080		C-CAP,U 100P-50CH

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C711	87-010-263-080		CAP, ELECT 100-10V
C712	87-010-196-080		CHIP CAPACITOR,0.1-25
C713	87-012-286-080		CAP, U 0.01-25
C714	87-012-286-080		CAP, U 0.01-25
C715	87-012-195-080		C-CAP,U 100P-50CH<EZ,K>
C717	87-012-286-080		CAP, U 0.01-25
C719	87-012-286-080		CAP, U 0.01-25
C720	87-012-195-080		C-CAP,U 100P-50CH
C721	87-012-176-080		CAP 15P
C722	87-012-176-080		CAP 15P
C723	87-012-274-080		CHIP CAP,U 1000P-50B
C725	87-012-274-080		CHIP CAP,U 1000P-50B
C727	87-010-196-080		CHIP CAPACITOR,0.1-25
C728	87-010-248-080		CAP, ELECT 220-10V
C753	87-010-263-080		CAP, ELECT 100-10V<EZ,K>
C755	87-012-286-080		CAP, U 0.01-25
C756	87-012-286-080		CAP, U 0.01-25
C757	87-012-188-080		C-CAP,U 47P-50 CH
C758	87-012-167-080		C-CAP,U 5P-50 CH
C761	87-010-196-080		CHIP CAPACITOR,0.1-25
C762	87-012-286-080		CAP, U 0.01-25
C763	87-010-829-080		CAP, U 0.047-16
C764	87-012-337-080		C-CAP,U 56P-50 CH<HR>
C765	87-012-286-080		CAP, U 0.01-25
C766	87-012-286-080		CAP, U 0.01-25
C768	87-012-286-080		CAP, U 0.01-25
C769	87-010-260-080		CAP, ELECT 47-25V
C770	87-010-829-080		CAP, U 0.047-16
C771	87-010-407-080		CAP, ELECT 33-50V
C772	87-010-829-080		CAP, U 0.047-16
C773	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C774	87-010-263-080		CAP, ELECT 100-10V
C775	87-010-404-080		CAP, ELECT 4.7-50V
C776	87-012-286-080		CAP, U 0.01-25<EZ,K>
C777	87-010-400-080		CAP, ELECT 0.47-50V
C778	87-010-401-080		CAP, ELECT 1-50V
C779	87-010-401-080		CAP, ELECT 1-50V
C780	87-010-196-080		CHIP CAPACITOR,0.1-25
C781	87-010-405-080		CAP, ELECT 10-50V
C782	87-010-405-080		CAP, ELECT 10-50V
C783	87-012-286-080		CAP, U 0.01-25
C784	87-012-286-080		CAP, U 0.01-25
C785	87-010-805-080		CAP, S 1-16
C786	87-010-805-080		CAP, S 1-16
C787	87-012-282-080		C-CAP,U 4700P-50 KB<EZ,K>
C787	87-012-280-080		CAP, U 3300P-50<HR>
C788	87-012-282-080		C-CAP,U 4700P-50 KB<EZ,K>
C788	87-012-280-080		CAP, U 3300P-50<HR>
C789	87-012-275-080		C-CAP,U 1200P-50 B
C790	87-012-275-080		C-CAP,U 1200P-50 B
C791	87-010-405-080		CAP, ELECT 10-50V
C793	87-012-275-080		C-CAP,U 1200P-50 B<EZ,K>
C793	87-012-273-080		C-CAP,U 820P-50 B<HR>
C794	87-010-406-080		CAP, ELECT 22-50
C795	87-A10-504-080		C-CAP,U 0.047-16 K B
C796	87-010-403-080		CAP, ELECT 3.3-50V
C797	87-012-276-080		CAP, CHIP SS 1500 PBK
C798	87-012-276-080		CAP, CHIP SS 1500 PBK
C799	87-010-829-080		CAP, U 0.047-16
C812	87-012-286-080		CAP, U 0.01-25
C813	87-010-197-080		CAP, CHIP 0.01 DM<HR>
C814	87-012-286-080		CAP, U 0.01-25
C818	87-010-196-080		CHIP CAPACITOR,0.1-25<EZ,K>
C819	87-010-197-080		CAP, CHIP 0.01 DM<HR>
C820	87-010-260-080		CAP, ELECT 47-25V
C821	87-012-286-080		CAP, U 0.01-25
C822	87-012-286-080		CAP, U 0.01-25
C823	87-012-286-080		CAP, U 0.01-25
C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C859	87-012-286-080		CAP, U 0.01-25<EZ,K>
C861	87-012-266-080		C-CAP,U 220P-50 B<1100(EZ,K)>
C861	87-012-199-080		C-CAP,U 2200P-50 CH<1200(EZ,K)>
C862	87-012-266-080		C-CAP,U 220P-50 B<1100(EZ,K)>
C862	87-012-199-080		C-CAP,U 2200P-50 CH<1200(EZ,K)>
C863	87-012-270-080		C-CAP,U 470P-50 KB<EZ,K>
C864	87-010-405-080		CAP, ELECT 10-50V<EZ,K>
C865	87-010-196-080		CHIP CAPACITOR,0.1-25<EZ,K>
C866	87-010-405-080		CAP, ELECT 10-50V<1100(EZ,K)>
C866	87-012-273-080		C-CAP,U 820P-50 B<1200(EZ,K)>
C867	87-012-286-080		CAP, U 0.01-25<EZ,K>
C868	87-012-184-080		C-CAP,U 33P-50 J CH<EZ,K>
C869	87-012-180-080		C-CAP,U 22P-50 J CH<EZ,K>
C940	87-012-286-080		CAP, U 0.01-25
C941	87-012-182-080		C-CAP,U 27P-50 CH<HR>
C942	87-012-172-080		C-CAP,U 0.01-25 K B<EZ,K>
C943	87-012-286-080		CAP, U 0.01-25<HR>
C944	87-010-575-080		C-CAP,S 560P-50 UJ<HR>
C945	87-012-286-080		CAP, U 0.01-25<HR>
C947	87-012-286-080		CAP, U 0.01-25
C949	87-A10-039-080		C-CAP,U 470P-50 J CH<EZ,K>
C950	87-A10-913-080		C-CAP, 4700P-50 J CH<HR>
C952	87-012-286-080		CAP, U 0.01-25
C953	87-012-286-080		CAP, U 0.01-25<HR>
C954	87-010-400-080		CAP, ELECT 0.47-50V<HR>
C956	87-010-263-080		CAP, ELECT 100-10V<HR>
C958	87-012-286-080		CAP, U 0.01-25<EZ,K>
C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C962	87-010-401-080		CAP, ELECT 1-50V
C964	87-012-170-080		C-CAP,U 8P-50 CH<HR>
CF801	87-008-423-010		CERAMIC FILTER, SFE10.7<EZ,K>
CF801	87-008-261-010		FILTER, SFE10.7MA5-A<HR>
CF802	82-785-747-010		CF MS2 GHY R<EZ,K>
CF802	87-008-261-010		FILTER, SFE10.7MA5-A<HR>
CN601	87-099-028-010		CONN,11P 6216 H
CN602	87-099-211-010		CONN,4P V BLK 6216<EZ,K>
FFE801	A8-6ZA-191-130		6ZA-1 FEENM<EZ,K>
FFE801	A8-8ZA-190-030		8ZA-1 FEUNM<HR>
J801	87-A60-657-010		TERMINAL,4P HSP-154V5-02<HR>
J802	87-033-241-010		TERMINAL,ANT 2P<EZ,K>
J940	81-754-629-010		CONNECTOR, 2P<HR>
L612	87-005-372-080		COIL S 1MHM<1200(EZ,K)>
L613	87-005-372-080		COIL S 1MHM<1200(EZ,K)>
L771	87-A50-266-010		COIL,FM DET-2N(TOK)
L772	87-A90-052-010		FLTR,CFMT-450A(TOK)<HR>
L772	87-A90-733-010		FLTR,PCFAZH-450<EZ,K>
L781	87-005-847-080		COIL,2.2UH(CECS)
L791	87-A50-027-010		COIL,1 POLE MPX(TOK)
L792	87-A50-027-010		COIL,1 POLE MPX(TOK)
L832	87-005-847-080		COIL,2.2UH(CECS)
L941	87-A50-020-010		COIL,ANT LW(COI)252KHZ<EZ,K>
L941	87-A50-022-010		COIL,ANT SW(COI)<HR>
L942	87-A50-019-010		COIL,OSC LW (COI)<EZ,K>
L942	87-A50-173-010		COIL,OSC SW-N(COI)<HR>
L943	87-005-372-080		COIL S 1MHM<HR>
L944	87-A50-159-010		COIL,10MH K C2B<HR>
L981	87-NF4-651-110		COIL,AM PACK2N(TOM)<EZ,K>
L981	88-NF8-625-110		COIL,AM PACK3N(TOK)<HR>
TC941	87-011-173-010		CERAMIC TRIMMER 20P<HR>
TC942	87-011-164-010		CAPACITOR,TRIMMER 30P<EZ,K>
TC943	87-011-164-010		CAPACITOR,TRIMMER 30P<HR>
X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
X771	87-030-354-010		VIB,CF BFU 450C<HR>
X851	87-A70-091-010		VIB,XTAL 4.332MHZ<EZ,K>

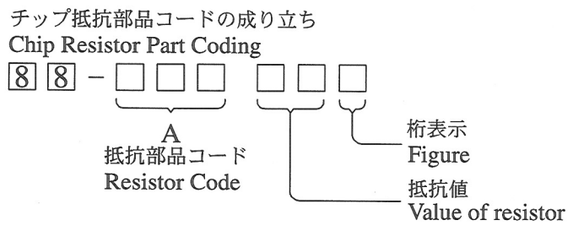
VM C.B

CN122	84-NF1-650-010		CONN ASSY,3P (S-M)<1100>
CN124	84-NF1-650-010		CONN ASSY,3P (S-M)<1200>

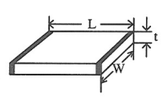
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
CONN 10P C.B			
CN904	87-A60-575-010		CONN,10P H 52303
CN905	87-099-198-010		CONN,10P 6216 V
AC1 C.B			
⚠ PT101	88-SPM-604-010		PT,EZ<1200EZ>
⚠ PT101	88-SPM-602-010		PT,HE<1200HR>
⚠ PT101	88-SPM-606-010		PT,K<1200K>
⚠ PT101	88-SP1-604-010		PT,EZ<1100EZ>
⚠ PT101	88-SP1-602-010		PT,HE<1100HR>
⚠ PT101	88-SP1-606-010		PT,K<1100K>
SUB TRANS C.B			
C138	87-010-387-080		CAP,E 470-25 SME
⚠ C140	87-A10-480-090		CAP,CER 4700P-250 M E KH<1200>
⚠ C141	87-A10-480-090		CAP,CER 4700P-250 M E KH
CN102	8Z-SP1-619-010		CONN ASSY,4P
⚠ PT102	8Z-NF8-662-010		PT,SUB ZNF-8(E)<EZ,K>
⚠ PT102	8Z-NF8-663-010		PT,SUB ZNF-8(H)<HR>
⚠ RY101	87-A91-281-010		RELAY,AC DC12V OSA-SS-212<HR>
⚠ RY102	87-A90-976-010		RELAY,AC12V SDT-S-112<EZ,K>
⚠ T101	87-A60-317-010		TERMINAL, 1P MSC
⚠ T102	87-A60-317-010		TERMINAL, 1P MSC
AC2 C.B			
CN101	84-NF1-650-010		CONN ASSY,3P(S-M)<1200>
⚠ PR101	87-A90-195-080		PROTECTOR 7A 125V 49
⚠ PR102	87-A90-195-080		PROTECTOR 7A 125V 49
⚠ PR103	87-026-682-080		PROTECTOR,10A 60V491
⚠ PR104	87-026-682-080		PROTECTOR,10A 60V491
⚠ PR105	87-026-681-080		PROTECTOR,5A 60V 491<1200>
⚠ PR106	87-026-681-080		PROTECTOR,5A 60V 491<1200>
WH101	87-A90-460-010		HLDR,WIRE 2.5-7P
AC1 SW C.B<HR ONLY>			
⚠ S101	87-036-173-010		SW,SL 2-2-4 SDKG

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

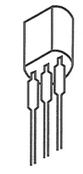
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

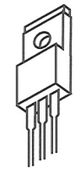
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION (MX-NH1100 / NAVH1200)

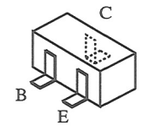


KTA1266GR
KTC3198GR

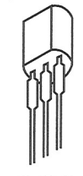
CC5551
CSD1489B



2SB1370
2SB1625
2SD2494

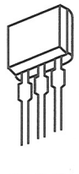


2SA1235 CSD1306E
2SA1514 DTA143EK
2SC2714 RN1410
2SC3052 RT1N141C
2SC3326 RT1N144C
2SD1306E RT1P141C
CMBT5551 RT1P144C

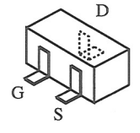


2SA1296

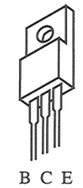
2SK3053



2SC4115S



2SK2158



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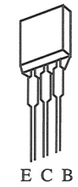
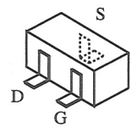
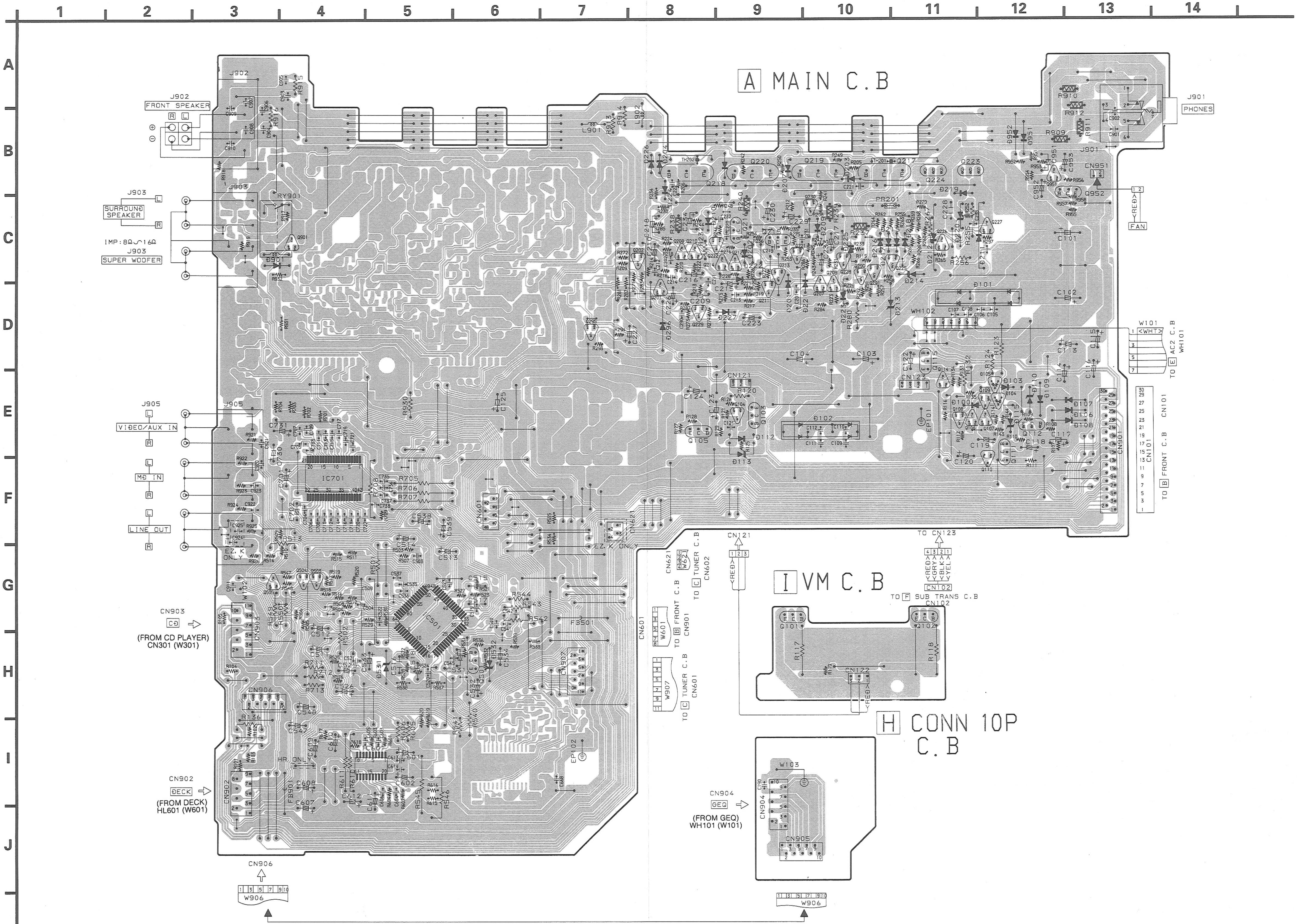
2SD2495



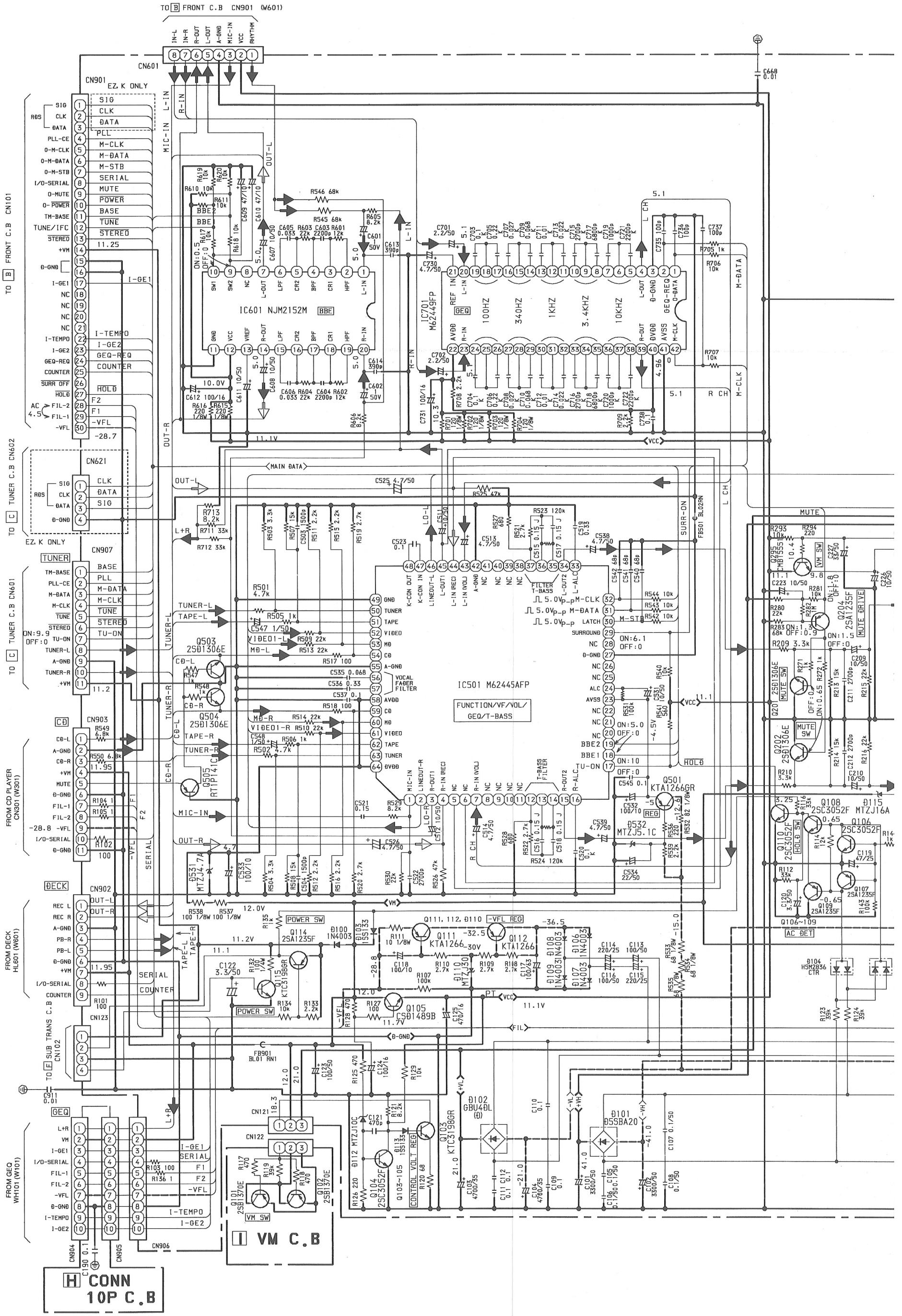
DTC114ES



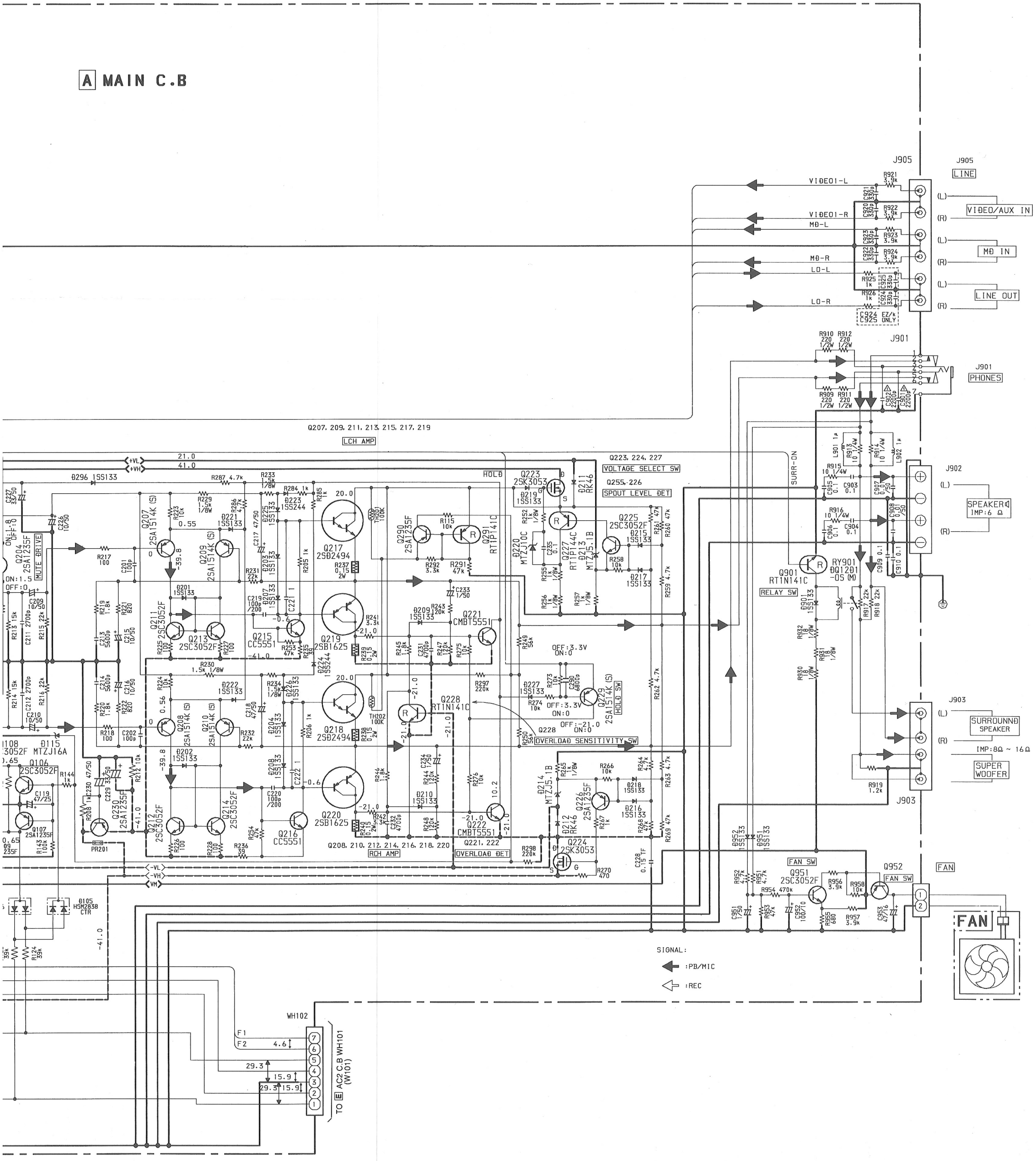
2SK360E


A MAIN C.B
I VM C.B
H CONN 10P C.B
J902
FRONT SPEAKER
J903
SURROUND SPEAKER
IMP: 8Ω∼16Ω
SUPER WOOFER
J905
VIDEO/AUX IN
MD IN
LINE OUT
EZ. K ONLY
CN903
CD
(FROM CD PLAYER) CN301 (W301)
CN902
DECK
(FROM DECK) HL601 (W601)
CN906
W906
J901
PHONES
CN951
FAN
W101
AC2 C.B
WH101
TO E
CN101
TO B FRONT C.B
CN121
TO CN123
CN102
TO F SUB TRANS C.B
TO C TUNER C.B
CN602
CN621
W621
TO B FRONT C.B
CN901
W601
CN601
W907
TO C TUNER C.B
CN601
CN904
GEQ
(FROM GEQ) WH101 (W101)
CN905
W103
IC701
IC501

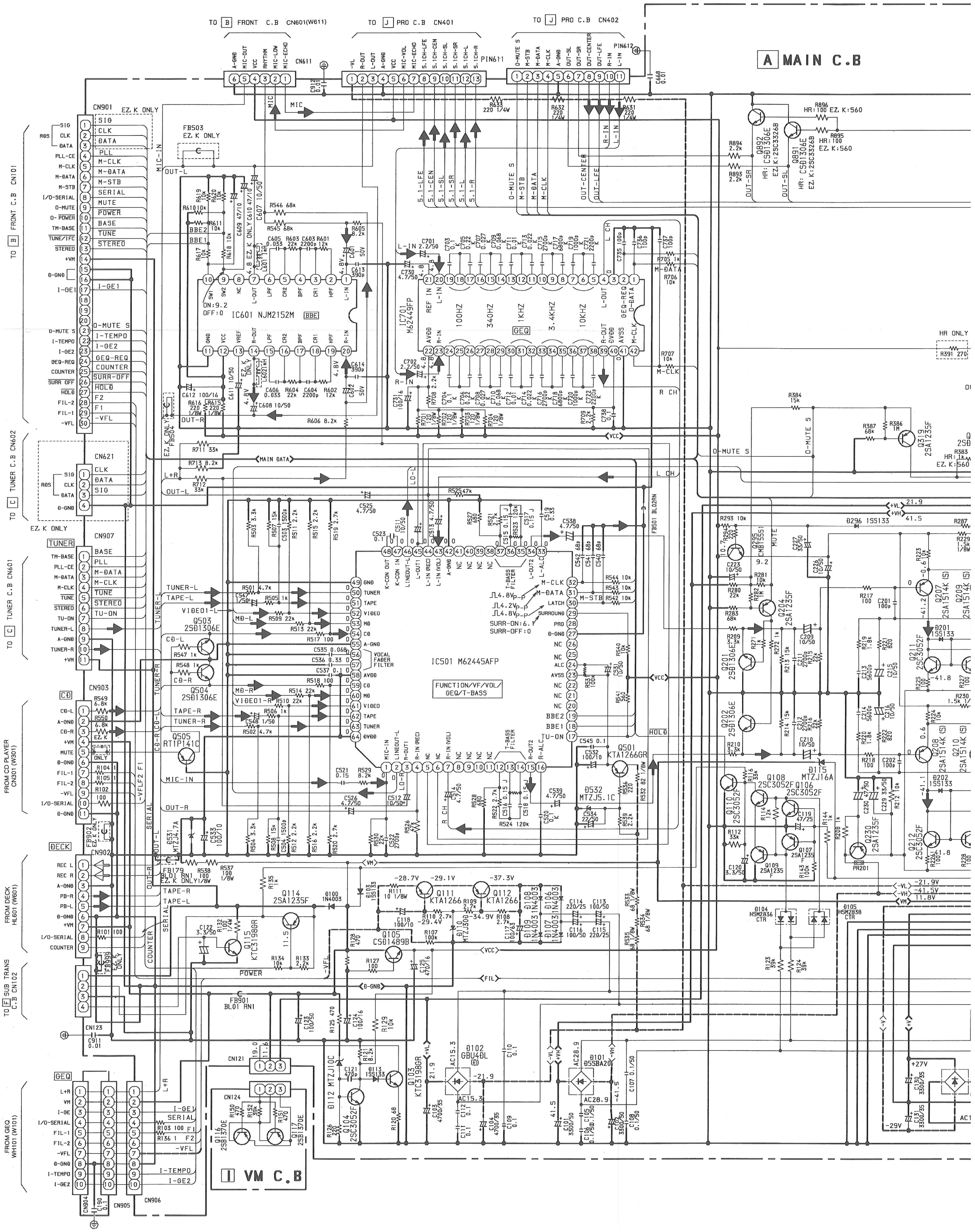
SCHEMATIC DIAGRAM – 1 (MAIN : MX-NH1100)

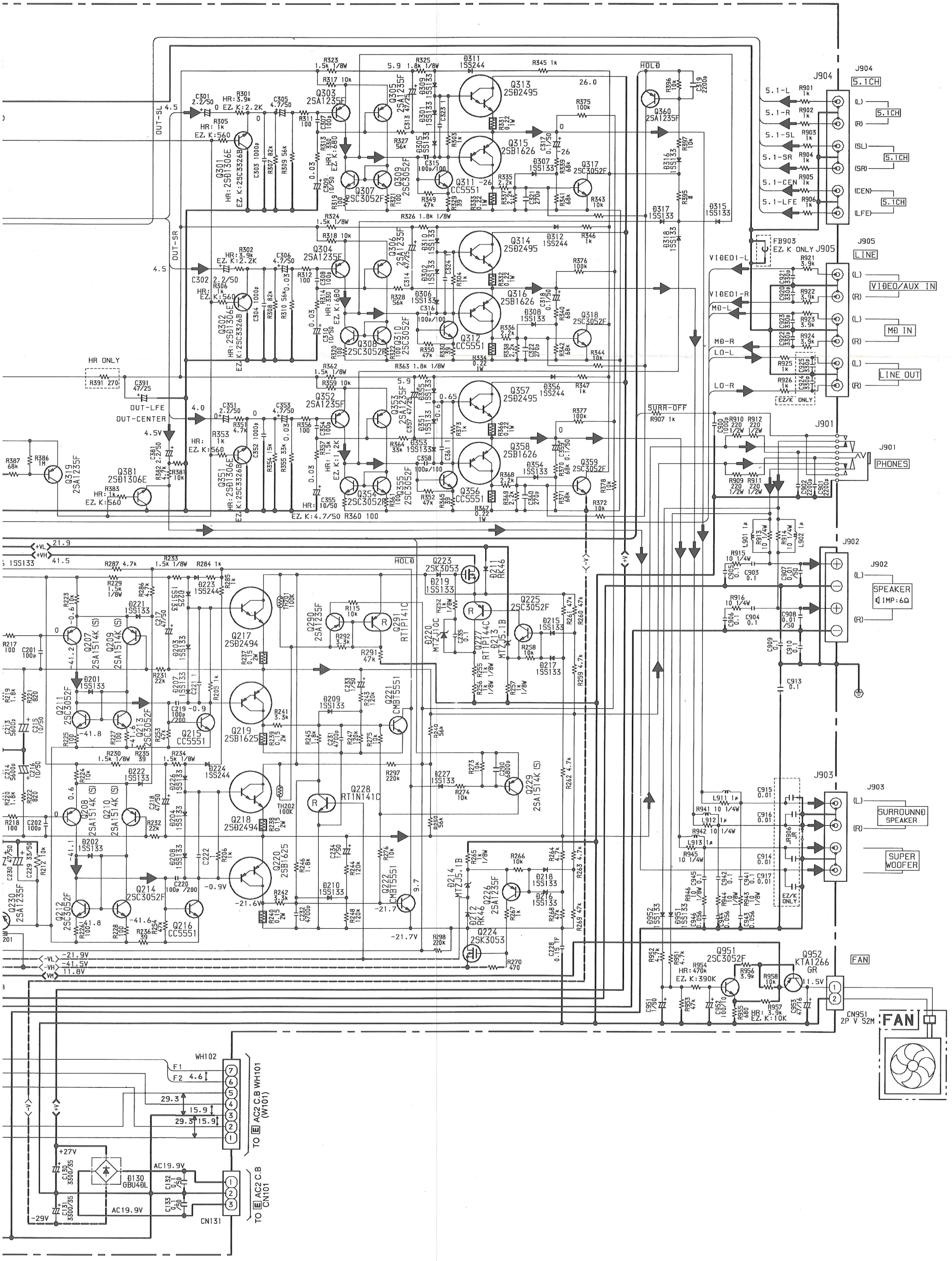


A MAIN C.B

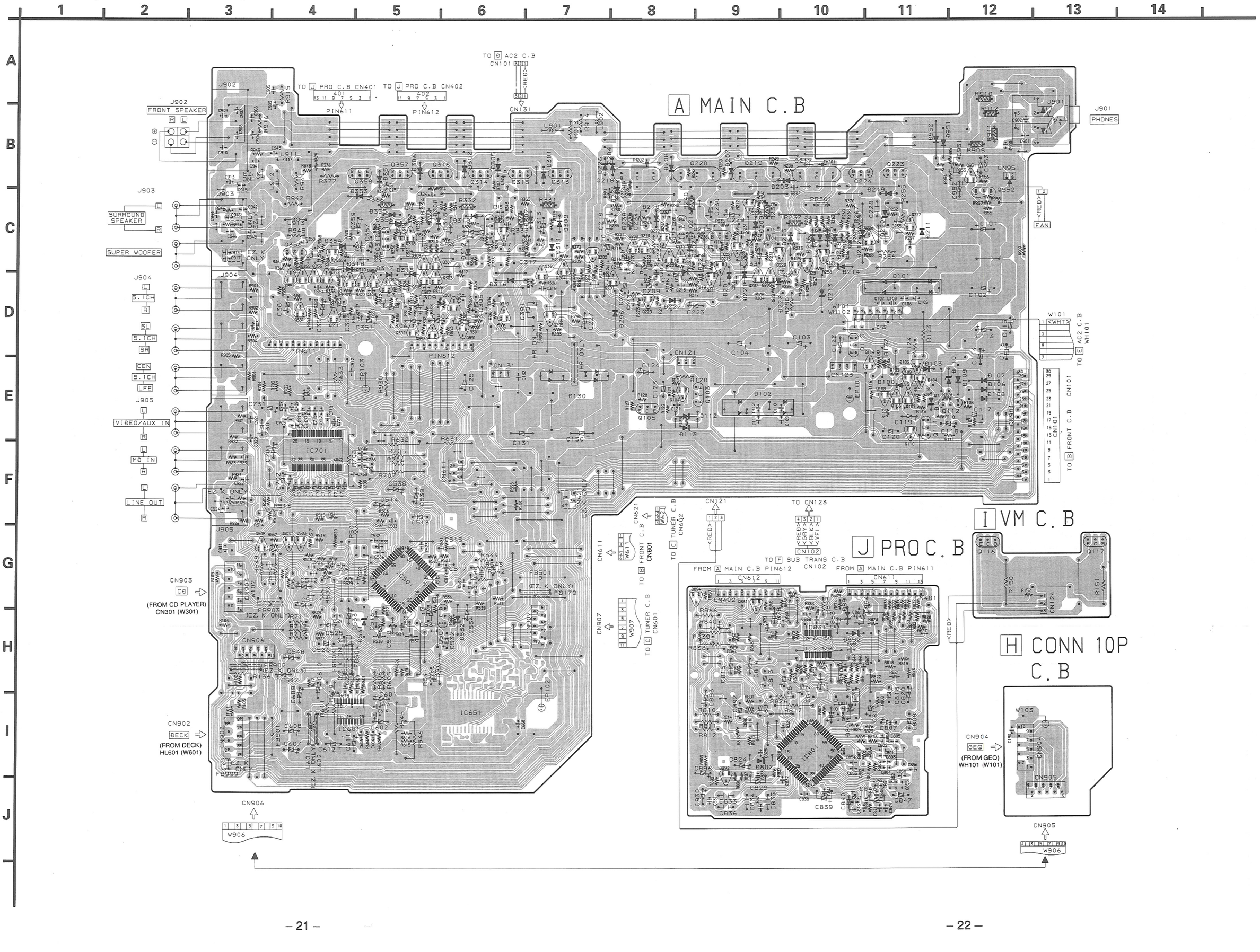

Q207, 209, 211, 213, 215, 217, 219
LCH AMP
Q208, 210, 212, 214, 216, 218, 220
RCH AMP
Q221, 222
OVERLOAD DET
Q223, 224, 227
VOLTAGE SELECT SW
Q255, 226
SPOUT LEVEL DET
OVERLOAD SENSITIVITY SW
HOLD SW
MUTE DRIVE
RELAY SW
SURR-ON
FAN SW
J905
LINE
VIDEO/AUX IN
MD IN
LINE OUT
J901
PHONES
J902
SPEAKER
IMP:6 Ω
J903
SURROUNND SPEAKER
IMP:8Ω ~ 16Ω
SUPER WOOFER
FAN
WH102
TO E AC2 C.B WH101 (W101)
SIGNAL:
:PB/MIC
:REC

SCHEMATIC DIAGRAM – 2 (MAIN : MX-NAVH1200)

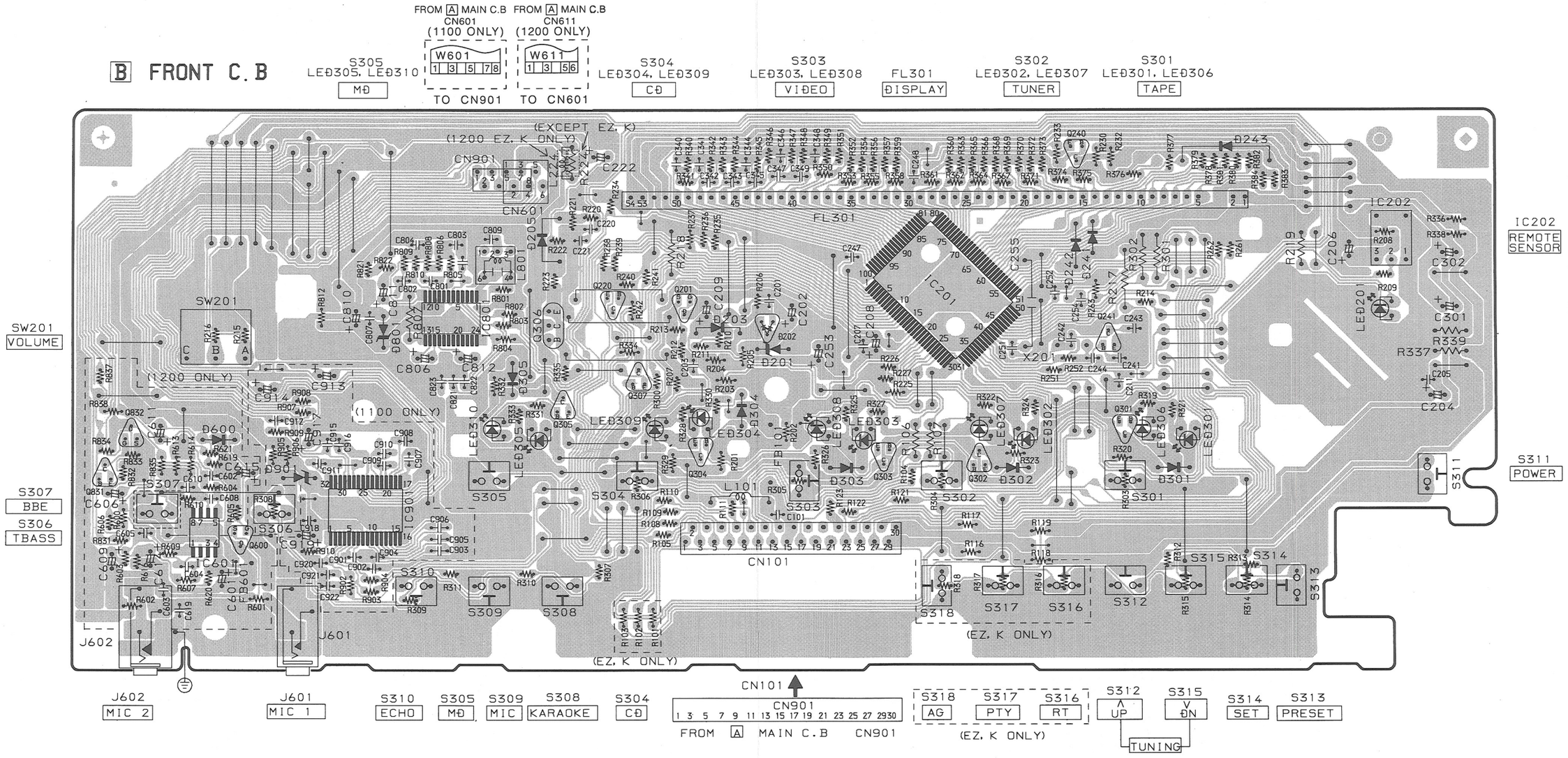


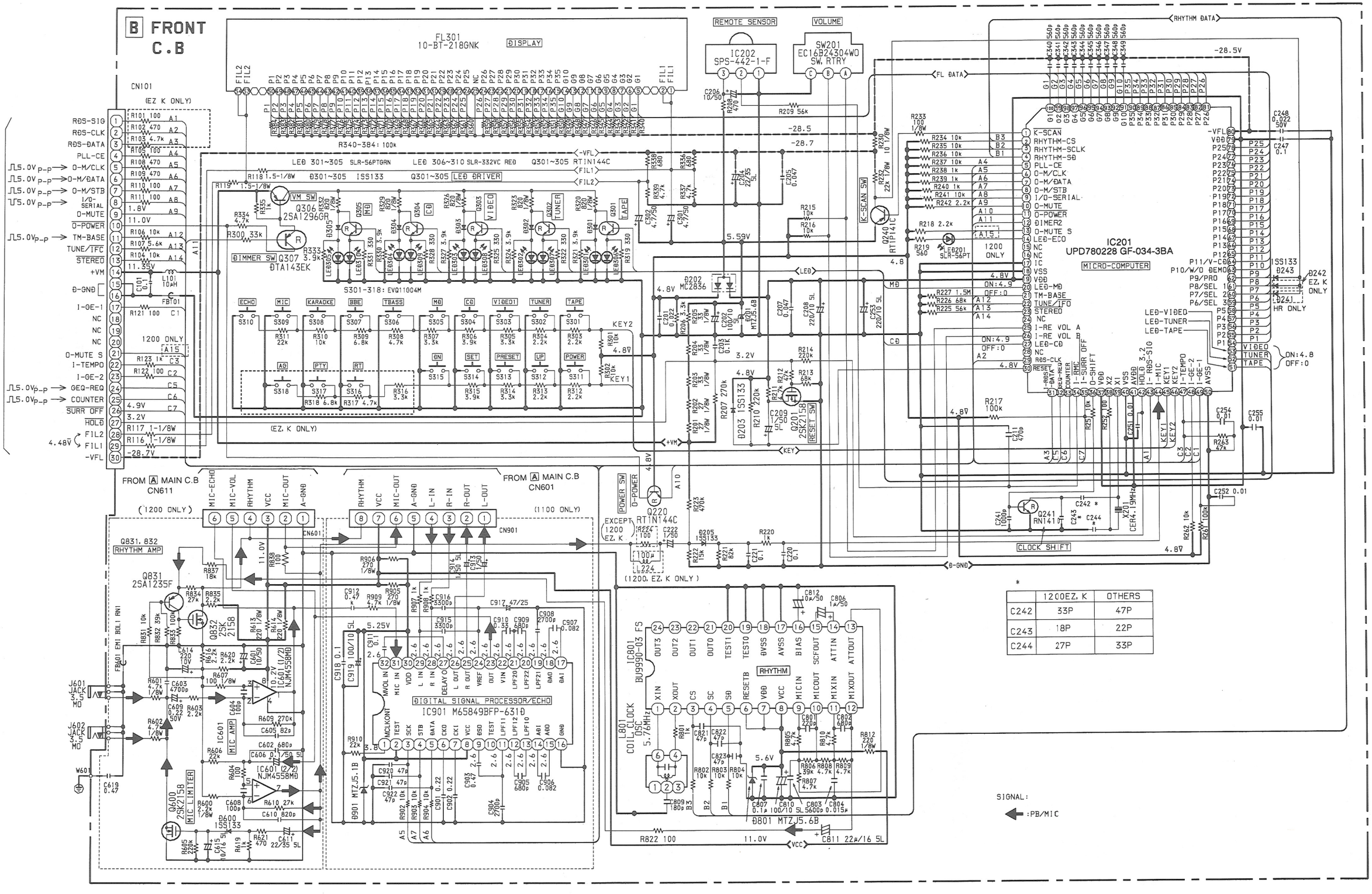

J904
5.1CH
5.1-L
5.1-R
5.1-SL
5.1-SR
5.1-CEN
5.1-LFE
(L)
(R)
(SL)
(SR)
(CEN)
(LFE)
J905
LINE
VIÐEO1-L
VIÐEO1-R
MÐ-L
MÐ-R
LO-L
LO-R
VIÐEO/AUX IN
MÐ IN
LINE OUT
FB903
EZ, K ONLY
J901
PHONES
SURR-OFF
J902
SPEAKER
IMP:6Ω
J903
SURROUNNÐ SPEAKER
SUPER WOOFER
FAN
CN951
2P V S2M
HOLÐ
OUT-SL
OUT-SR
OUT-LFE
OUT-CENTER
HR ONLY
WH102
TO E AC2 C.B WH101 (W101)
TO E AC2 C.B CN101
CN131
+27V
-29V
AC19.9V
Ð130 GBU4BL

WIRING – 2 (MAIN : MX-NAVH1200)

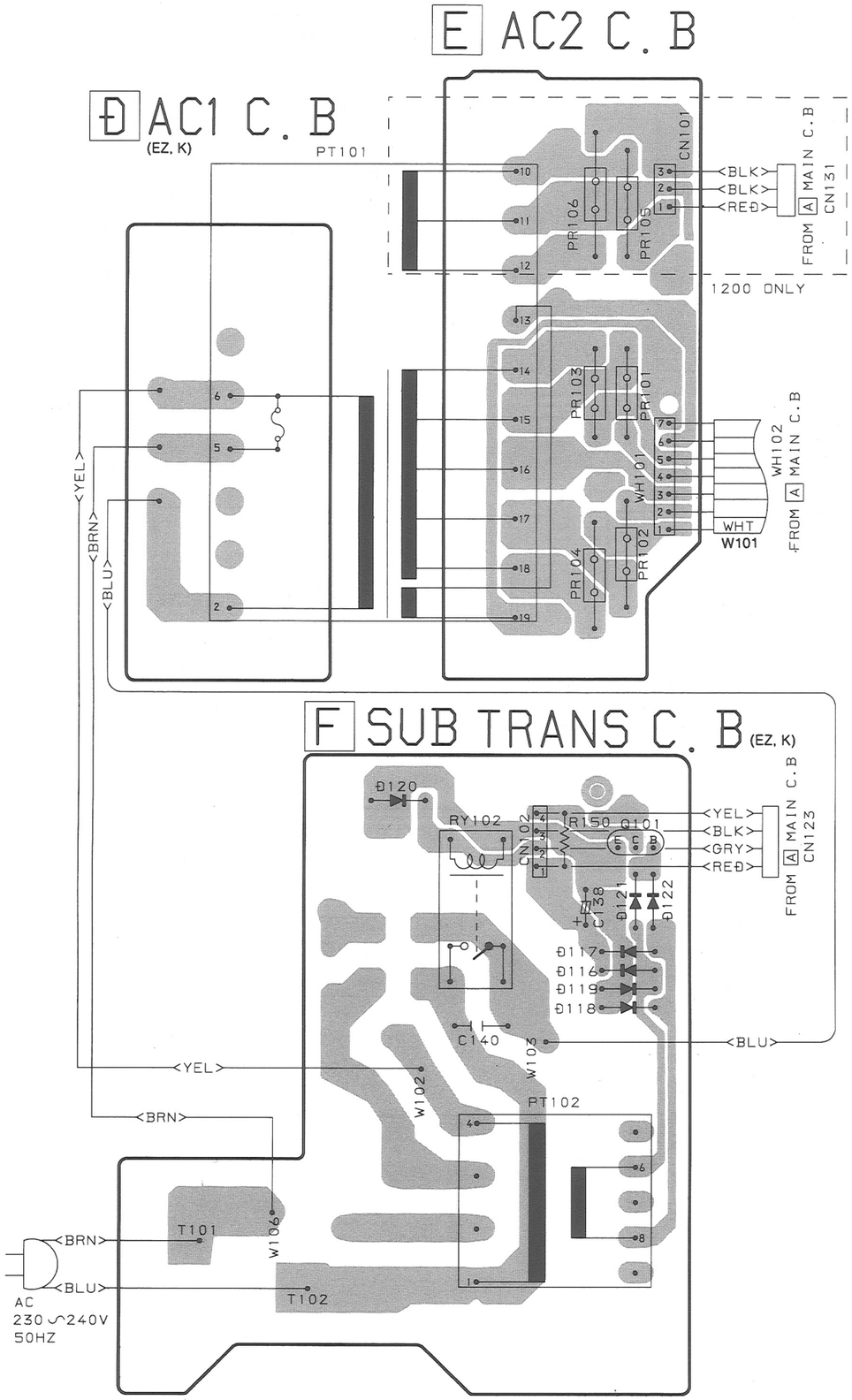


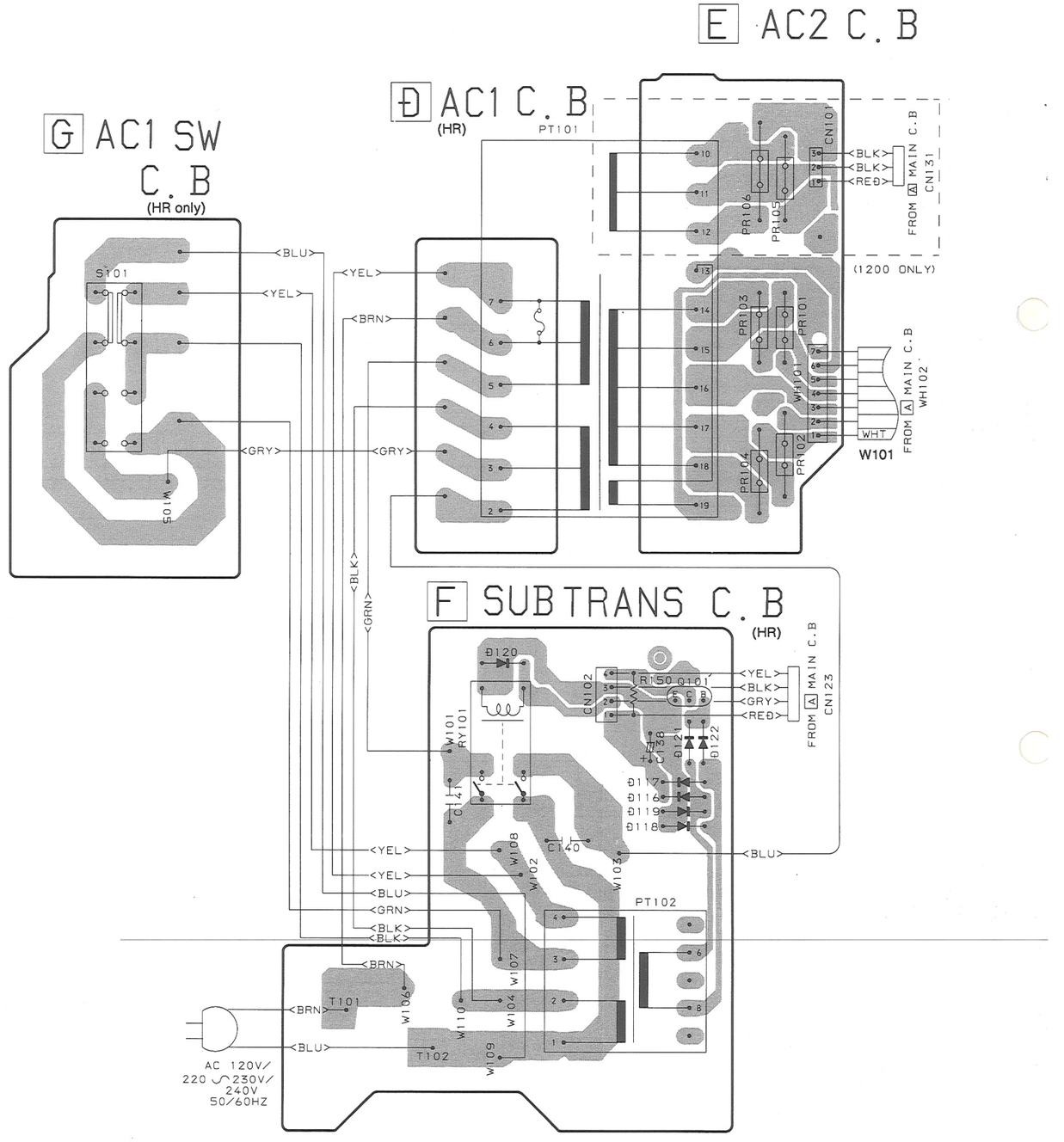
B FRONT C.B

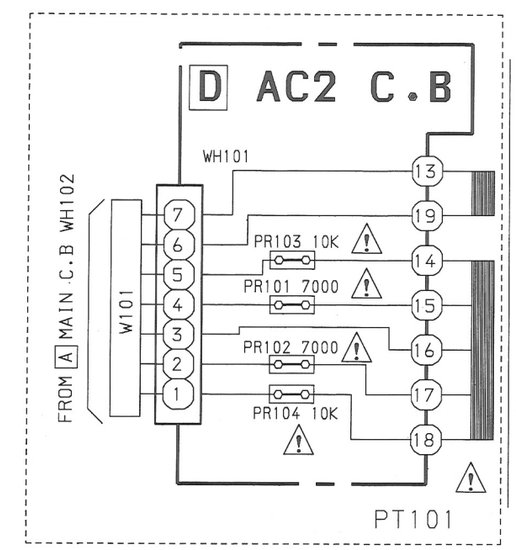

FROM A MAIN C.B CN601 (1100 ONLY)
FROM A MAIN C.B CN611 (1200 ONLY)
W601
W611
TO CN901
TO CN601
S305 LEÐ305, LEÐ310 MÐ
S304 LEÐ304, LEÐ309 CÐ
S303 LEÐ303, LEÐ308 VIÐEO
FL301 ÐISPLAY
S302 LEÐ302, LEÐ307 TUNER
S301 LEÐ301, LEÐ306 TAPE
(EXCEPT EZ, K)
(1200 EZ, K ONLY)
CN901
CN601
FL301
IC201
IC202
IC202 REMOTE SENSOR
SW201
SW201 VOLUME
(1200 ONLY)
(1100 ONLY)
S307 BBE
S306 TBASS
S311 POWER
CN101
(EZ, K ONLY)
J602
J601
J602 MIC 2
J601 MIC 1
S310 ECHO
S305 MÐ
S309 MIC
S308 KARAOKE
S304 CÐ
CN101
CN901
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 30
FROM A MAIN C.B CN901
S318 AG
S317 PTY
S316 RT
(EZ, K ONLY)
S312 UP
S315 ÐN
TUNING
S314 SET
S313 PRESET



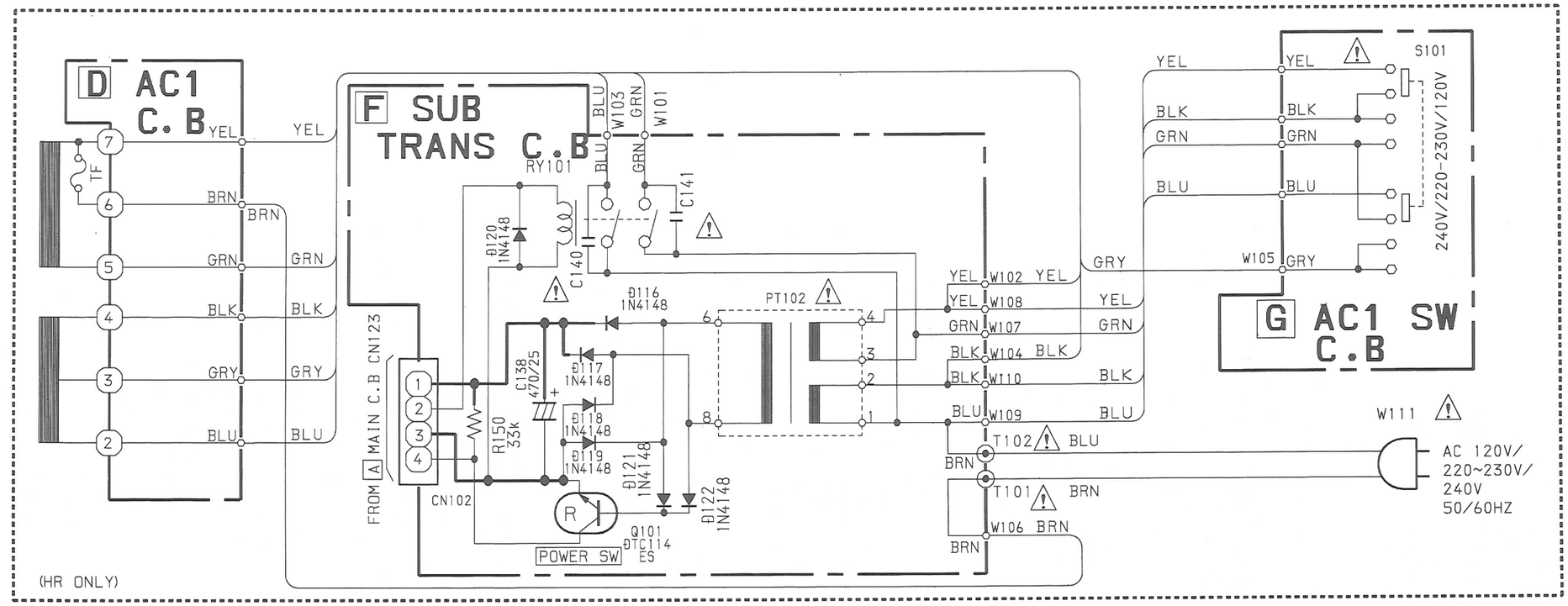
*	1200EZ, K	OTHERS
C242	33P	47P
C243	18P	22P
C244	27P	33P


E AC2 C. B
Đ AC1 C. B
(EZ, K)
PT101
CN101
PR106
PR105
BLK
BLK
REĐ
FROM A MAIN C. B
CN131
1200 ONLY
PR103
PR101
WH102
WH101
WHT
W101
PR104
PR102
YEL
BRN
BLU
F SUB TRANS C. B (EZ, K)
Đ120
RY102
CN102
R150
Q101
YEL
BLK
GRY
REĐ
FROM A MAIN C. B
CN123
C138
Đ121
Đ122
Đ117
Đ116
Đ119
Đ118
C140
BLU
YEL
W102
W103
PT102
BRN
T101
W106
BRN
BLU
T102
AC
230 ∽240V
50HZ

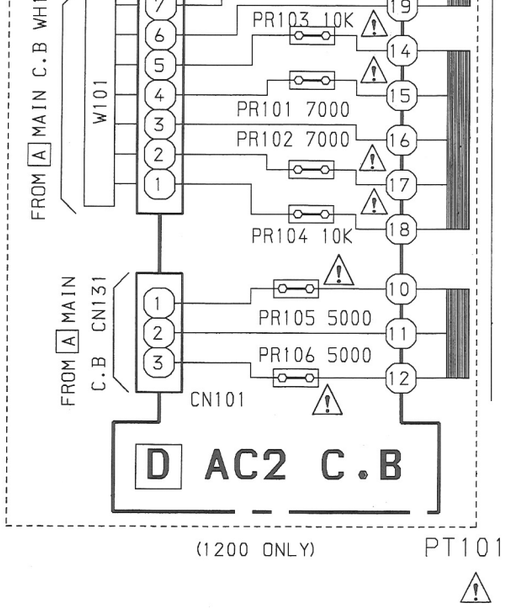

E AC2 C. B
G AC1 SW
C. B
(HR only)
S101
W105
BLU
YEL
GRY
Đ AC1 C. B
(HR)
PT101
CN101
PR106
PR105
BLK
BLK
REĐ
FROM A MAIN C. B
CN131
(1200 ONLY)
PR103
PR101
WH101
WH102
WHT
W101
PR104
PR102
YEL
BRN
GRY
BLK
GRN
F SUB TRANS C. B
(HR)
Đ120
CN102
R150
Q101
YEL
BLK
GRY
REĐ
FROM A MAIN C. B
CN123
W101
RY101
C141
C138
Đ121
Đ122
Đ117
Đ116
Đ119
Đ118
C140
BLU
YEL
YEL
BLU
GRN
BLK
BLK
W108
W102
W103
PT102
BRN
T101
W106
W110
W104
W107
BRN
BLU
T102
W109
AC 120V/
220 ∽230V/
240V
50/60HZ



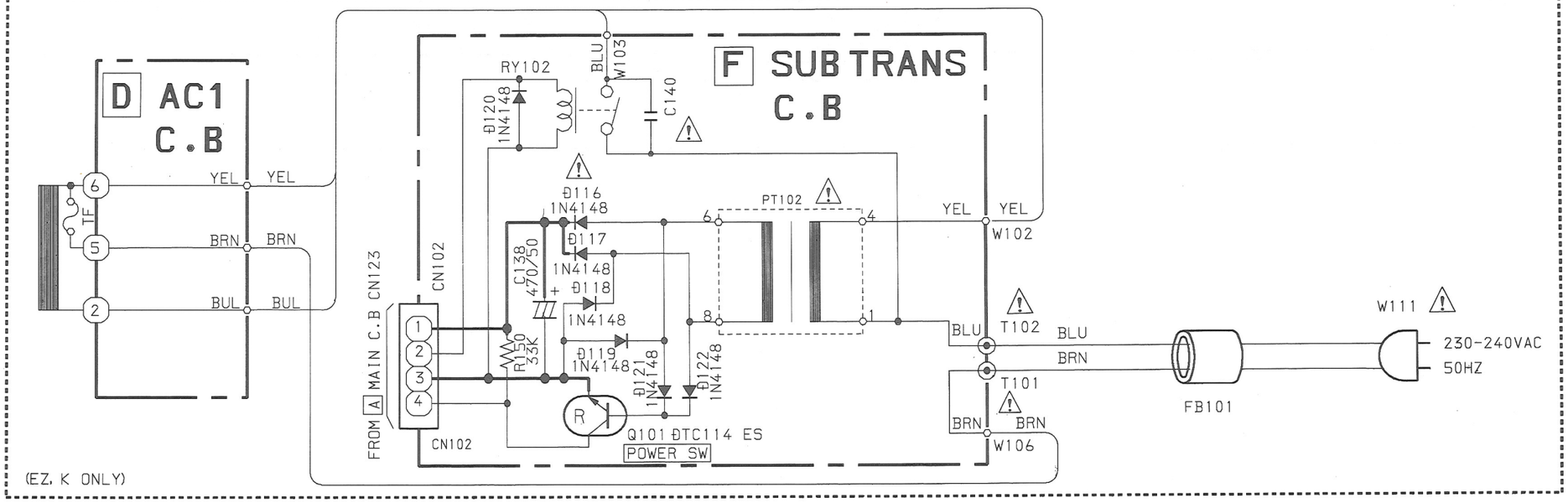
(1100 ONLY)



(HR ONLY)

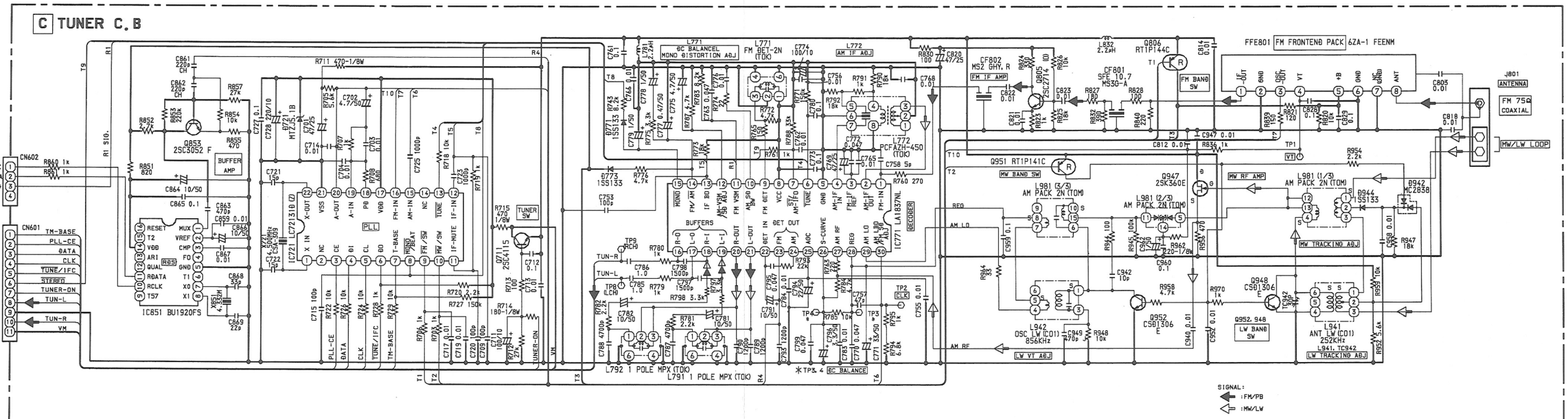


(1200 ONLY)

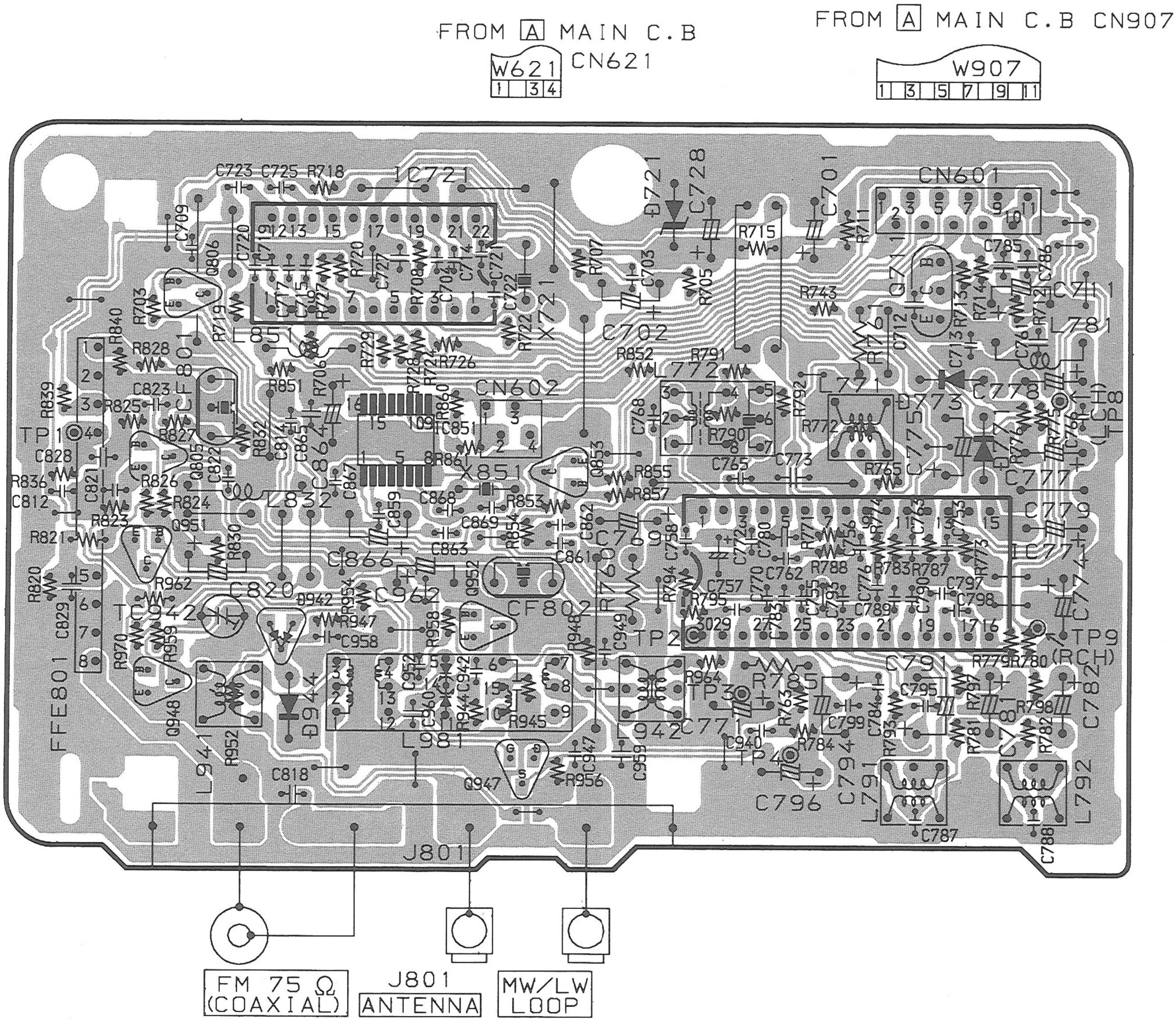


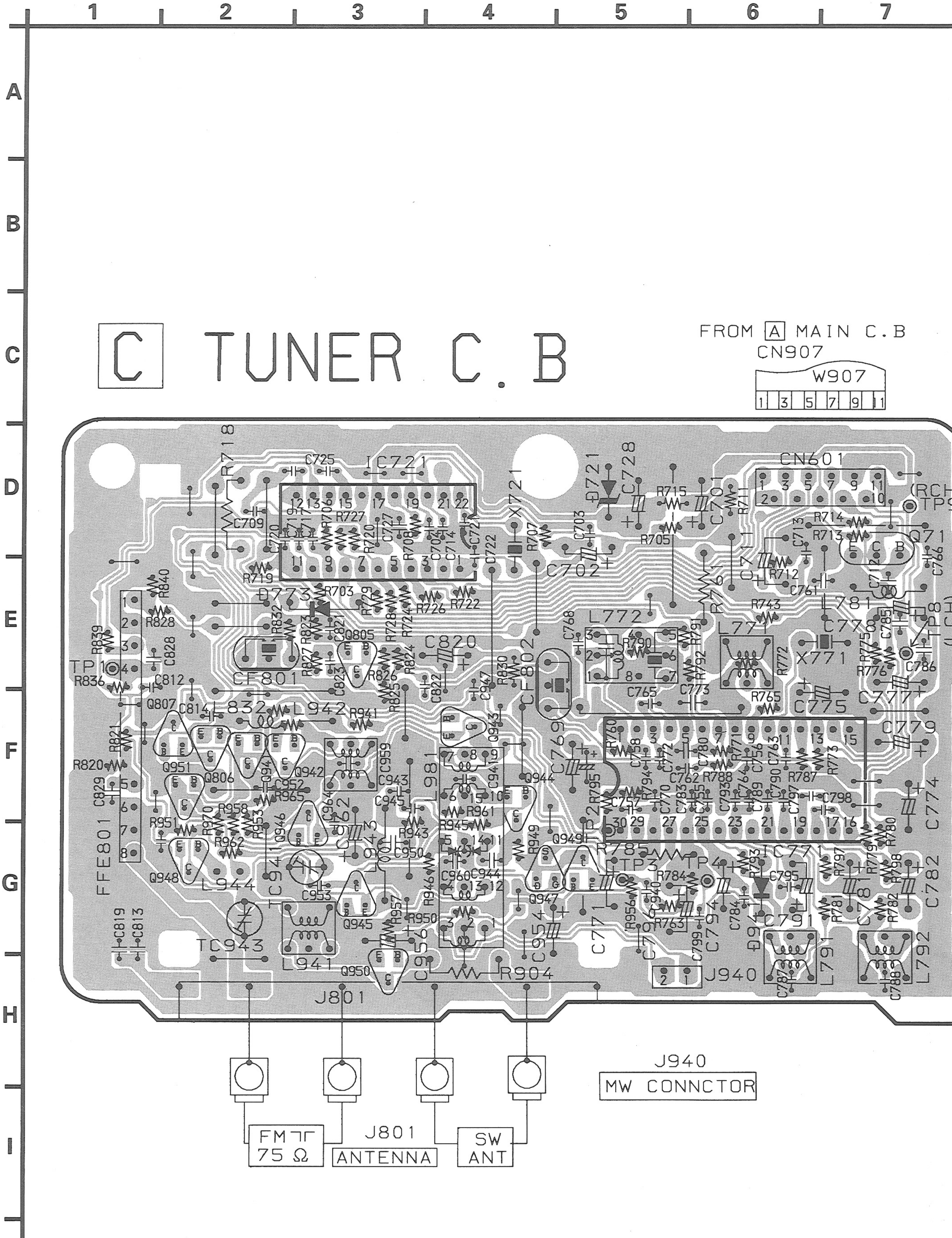
(EZ, K ONLY)

SCHEMATIC DIAGRAM – 5 (TUNER : MX-NH1100 / NAVH1200 <EZ, K>)

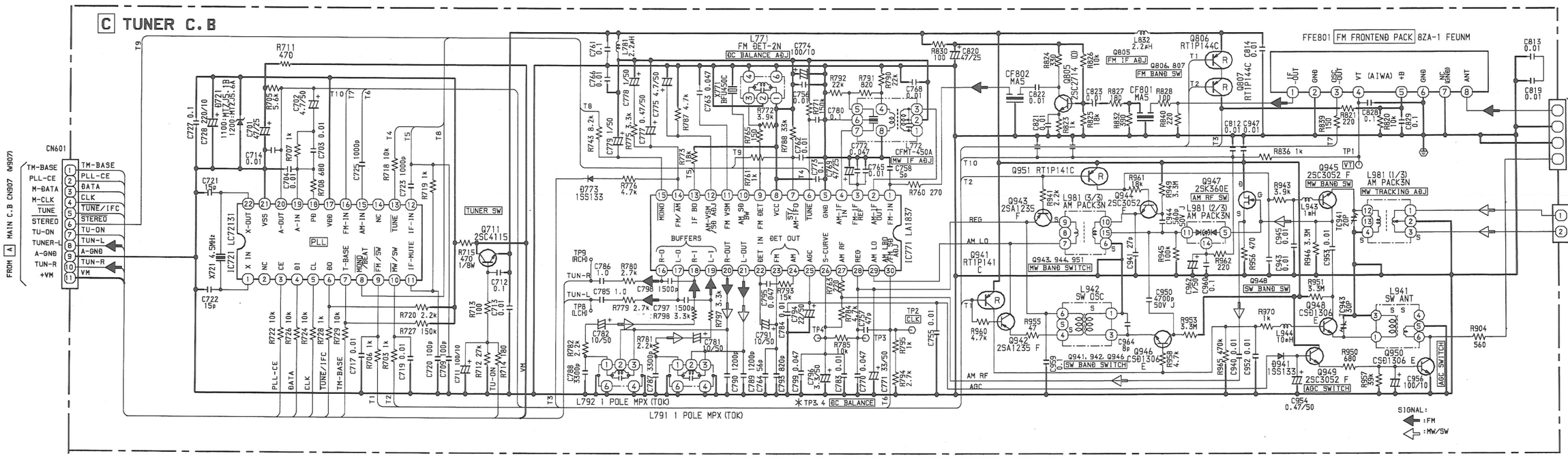


C TUNER C.B

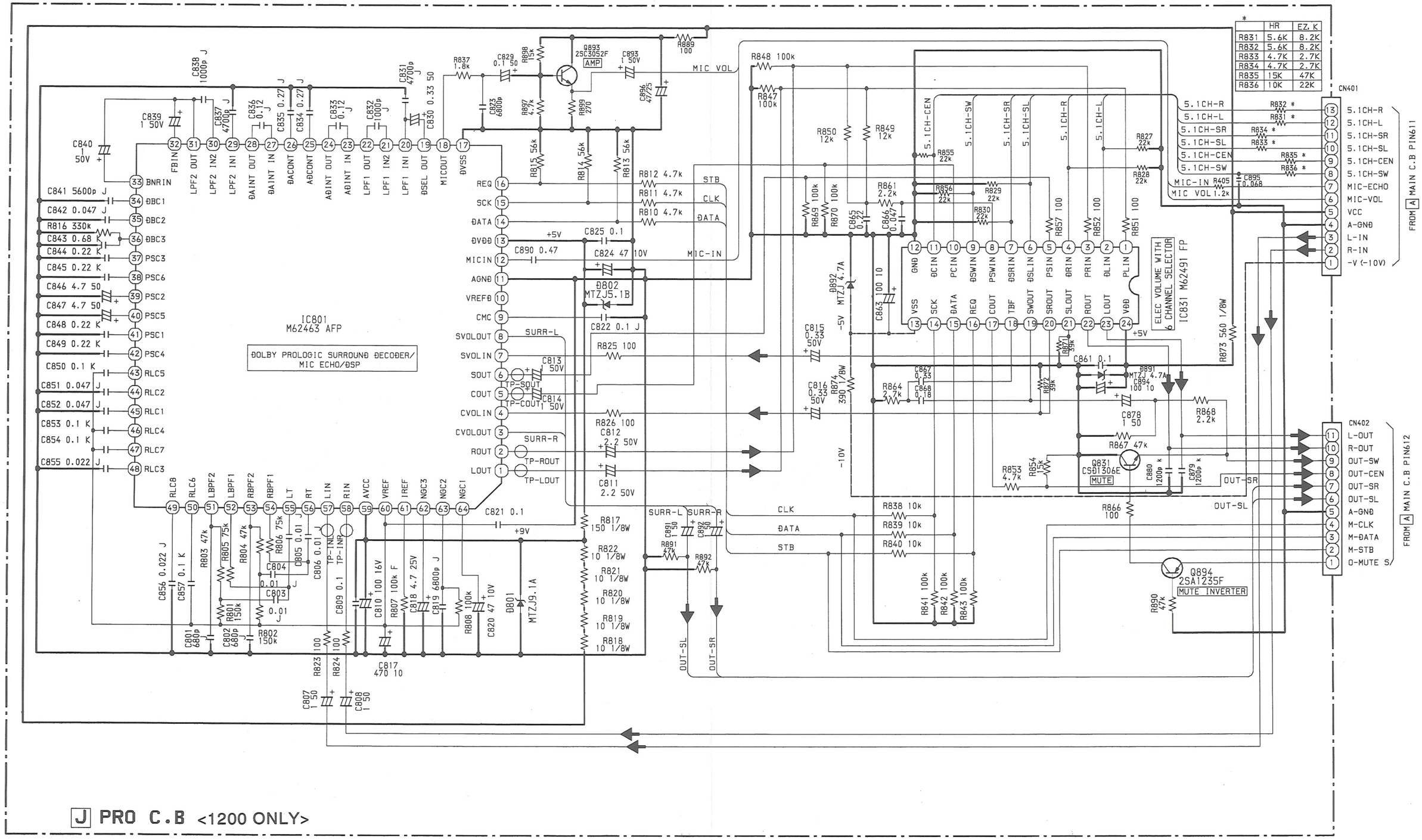

FROM A MAIN C.B CN621
W621
FROM A MAIN C.B CN907
W907
CN601
CN602
IC721
IC771
J801
FM 75 Ω (COAXIAL)
J801 ANTENNA
MW/LW LOOP


C TUNER C.B
FROM A MAIN C.B
CN907
W907
CN601
(RCH)
TP9
TP8
(LCH)
IC721
IC771
FFE801
J801
J940
MW CONNCTOR
FM 75 Ω
ANTENNA
SW ANT

SCHEMATIC DIAGRAM – 6 (TUNER : MX-NH1100 / NAVH1200 <HR>)



SCHEMATIC DIAGRAM – 7 (PROLOGIC : MX-NAVH1200 ONLY)

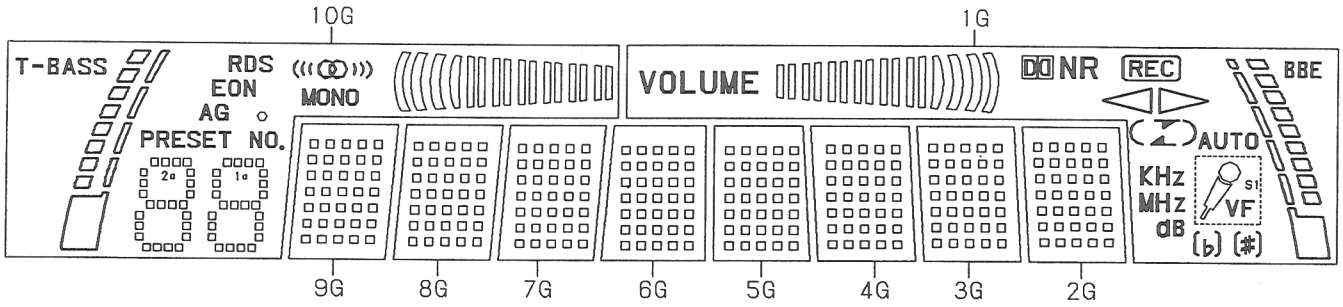


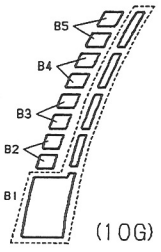
*	HR	EZ, K
R831	5.6K	8.2K
R832	5.6K	8.2K
R833	4.7K	2.7K
R834	4.7K	2.7K
R835	15K	47K
R836	10K	22K

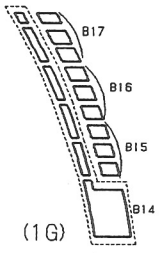
J PRO C.B <1200 ONLY>

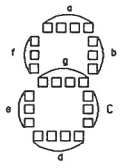
FL (10-BT-218GNK) GRID ASSIGNMENT & ANODE CONNECTION (MX-NH1100 / NAVH1200)

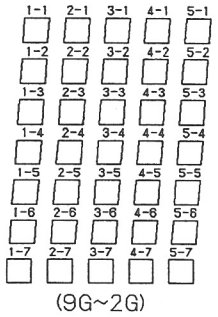
GRID ASSIGNMENT









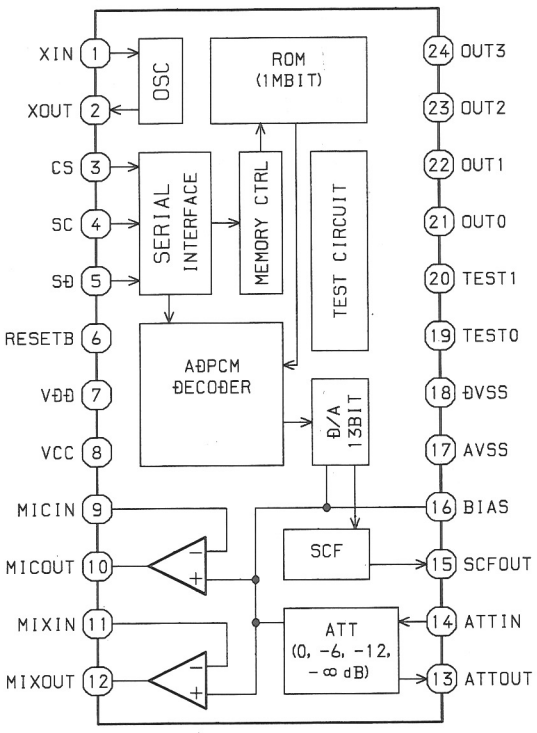


ANODE CONNECTION

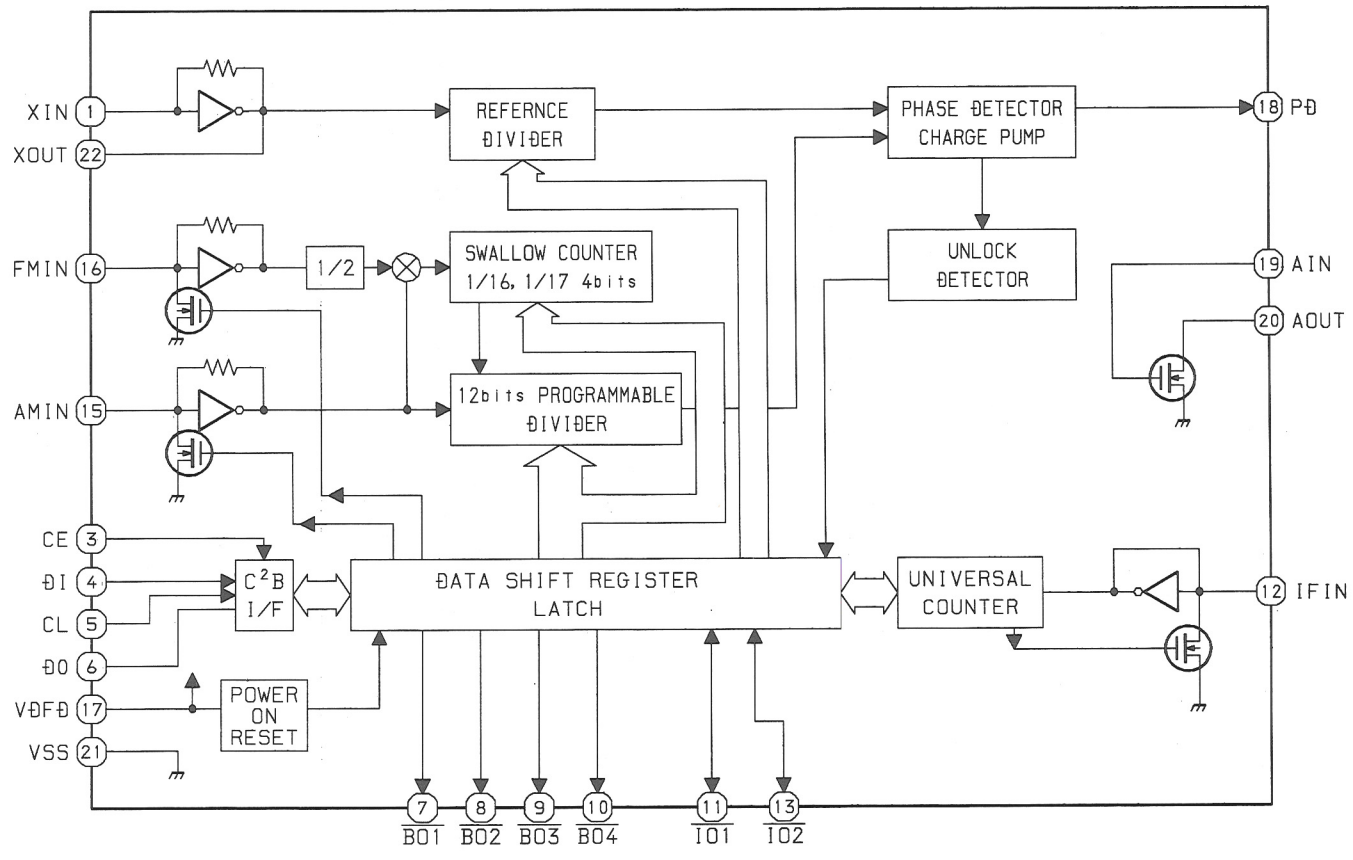
	10G	9G~2G	1G
P1	((◎))	1-1	VOLUME
P2	B6	2-1	B18
P3	B7	3-1	B19
P4	B8	4-1	B20
P5	B9	5-1	B21
P6	B10	1-2	B22
P7	B11	2-2	B23
P8	B12	3-2	B24
P9	B13	4-2	B25
P10	MONO	5-2	DD NR
P11	RDS	1-3	REC
P12	EON	2-3	◁
P13	AG	3-3	▷
P14	○	4-3	(
P15	PRESET No.	5-3	◢
P16	2a	1-4	)
P17	2f	2-4	KHz
P18	2b	3-4	MHz
P19	2g	4-4	dB
P20	2e	5-4	((b))
P21	2c	1-5	♭
P22	2d	2-5	S1
P23	1a	3-5	AUTO
P24	1f	4-5	♯
P25	1b	5-5	((#))
P26	1g	1-6	B14
P27	1e	2-6	B17
P28	1c	3-6	B16
P29	1d	4-6	B15
P30	T-BASS	5-6	BBE
P31	B1	1-7	-
P32	B2	2-7	-
P33	B3	3-7	-
P34	B4	4-7	-
P35	B5	5-7	-

IC BLOCK DIAGRAM (MX-NH1100 / NAVH1200)

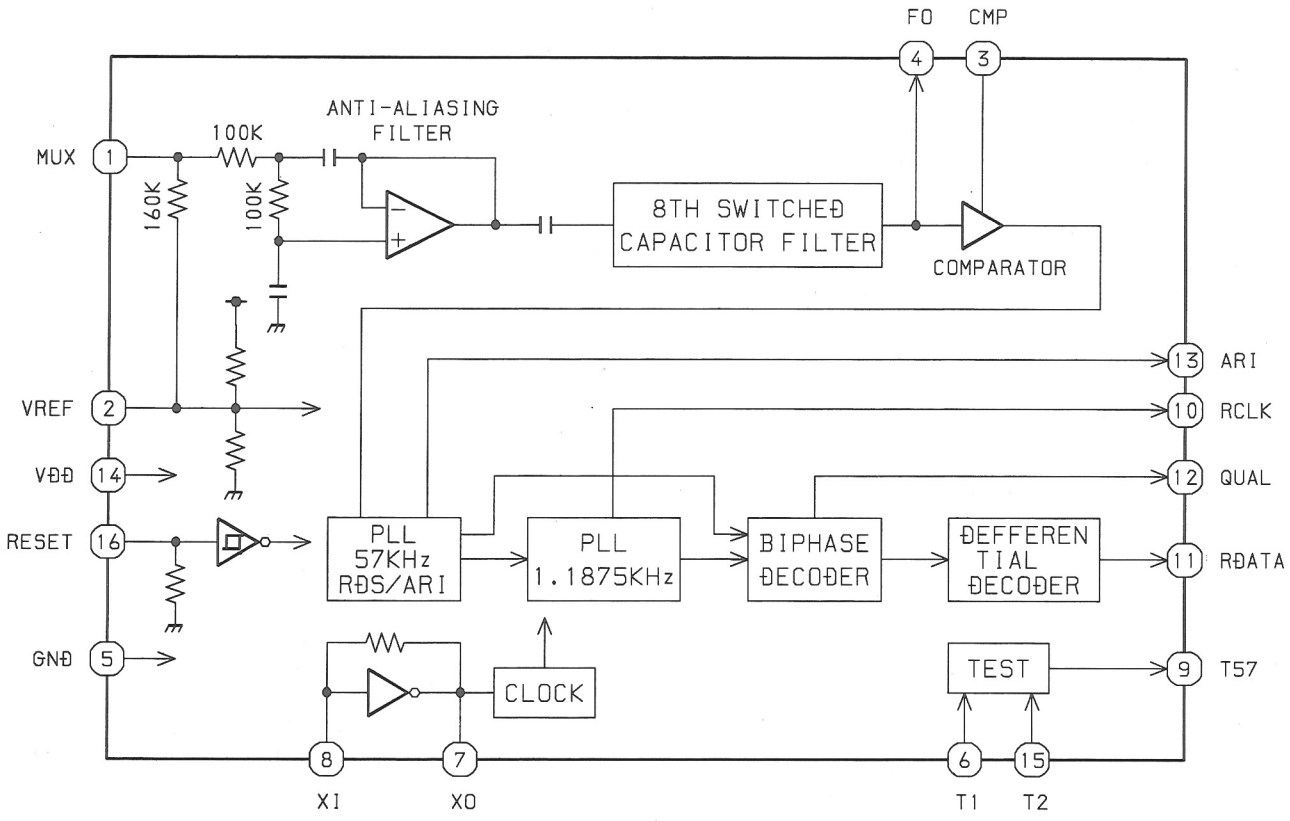
IC, BU9990-03FS



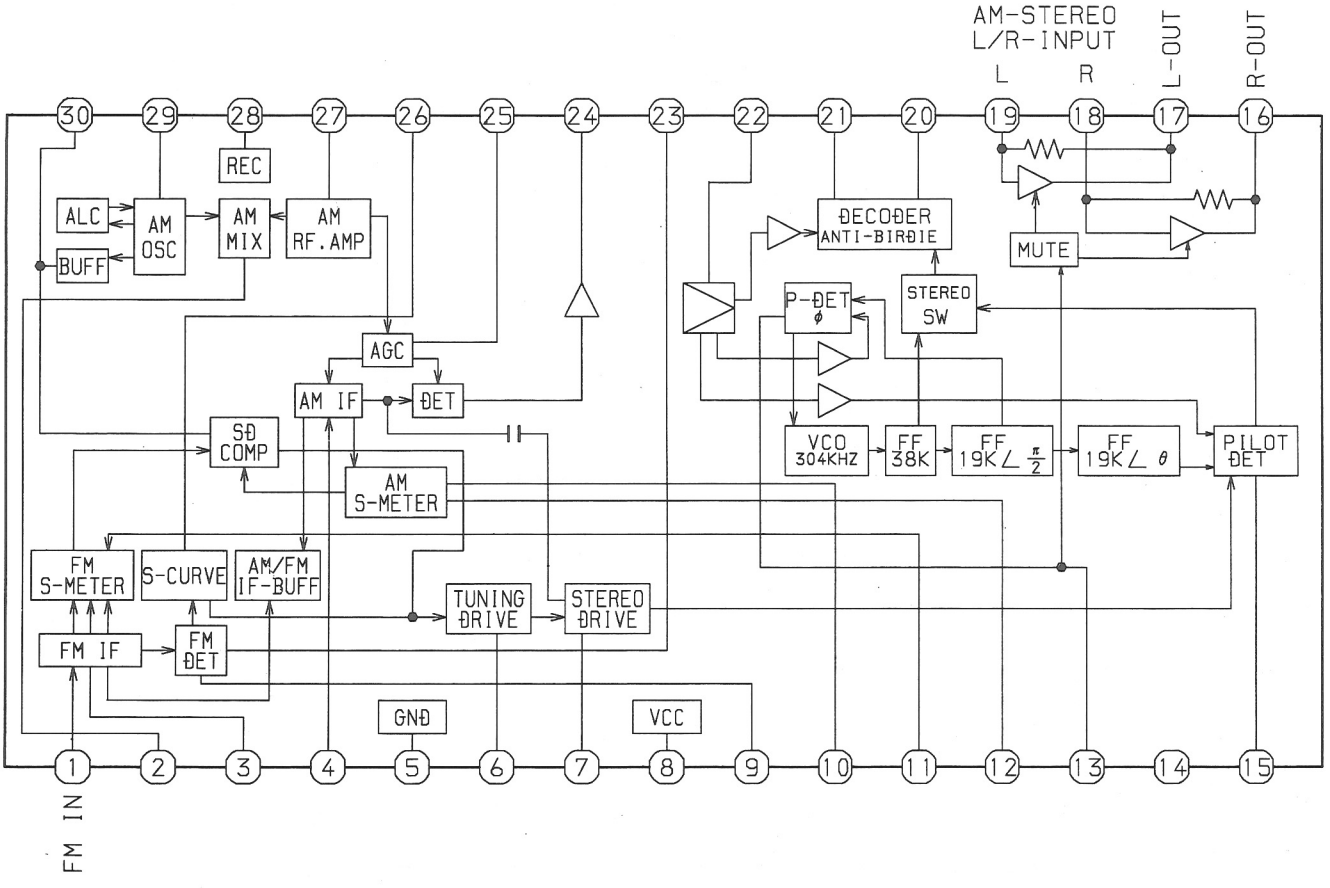
IC, LC72131D



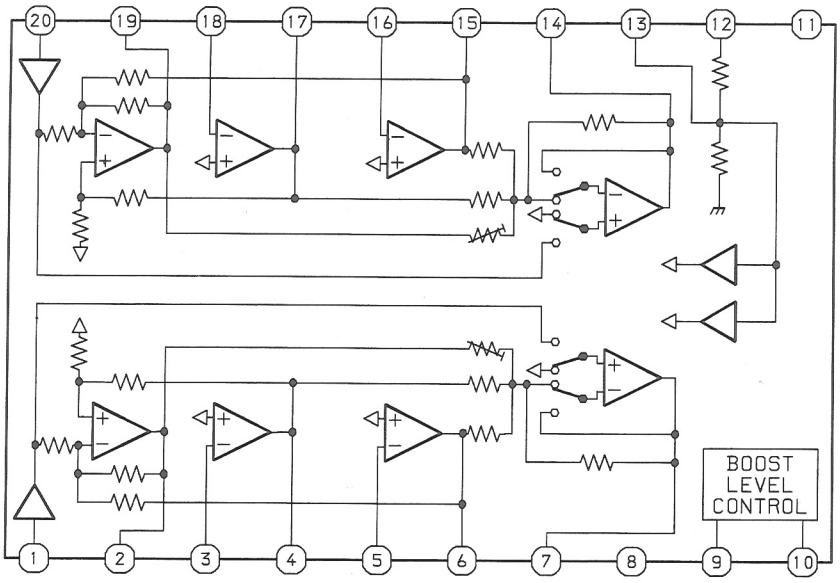
IC, BU1920FS



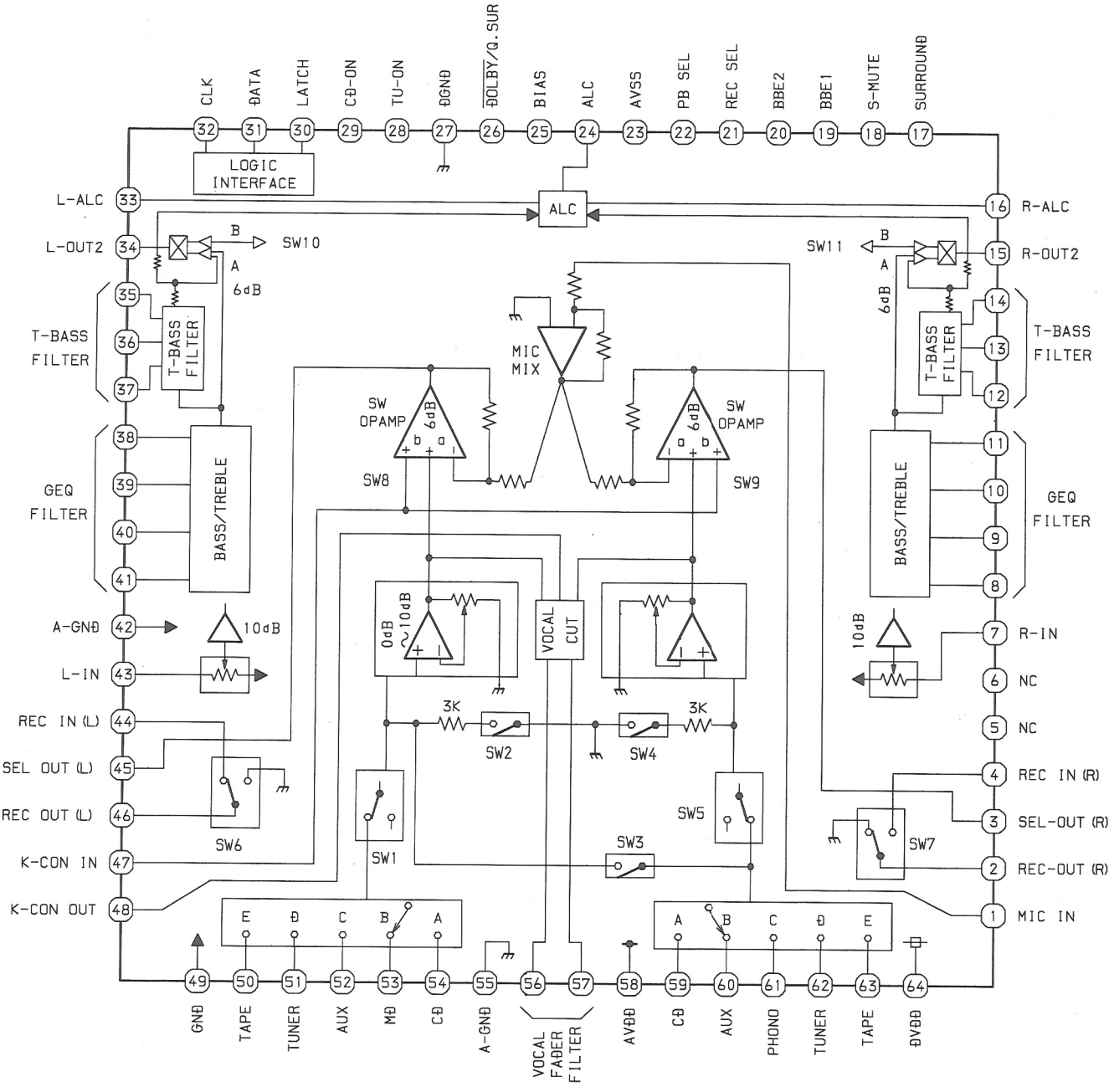
IC, LA1837NL



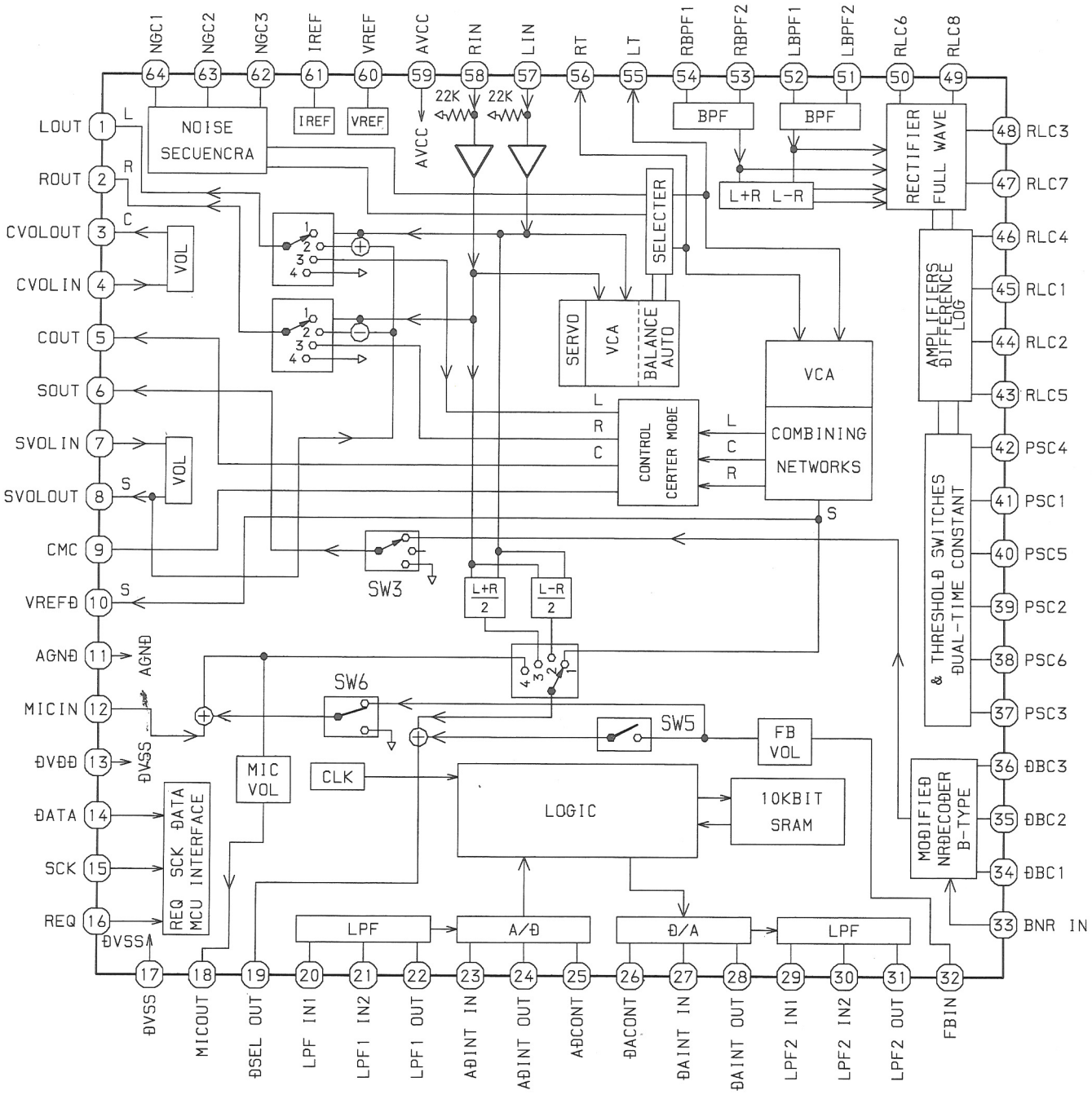
IC, NJM2152M



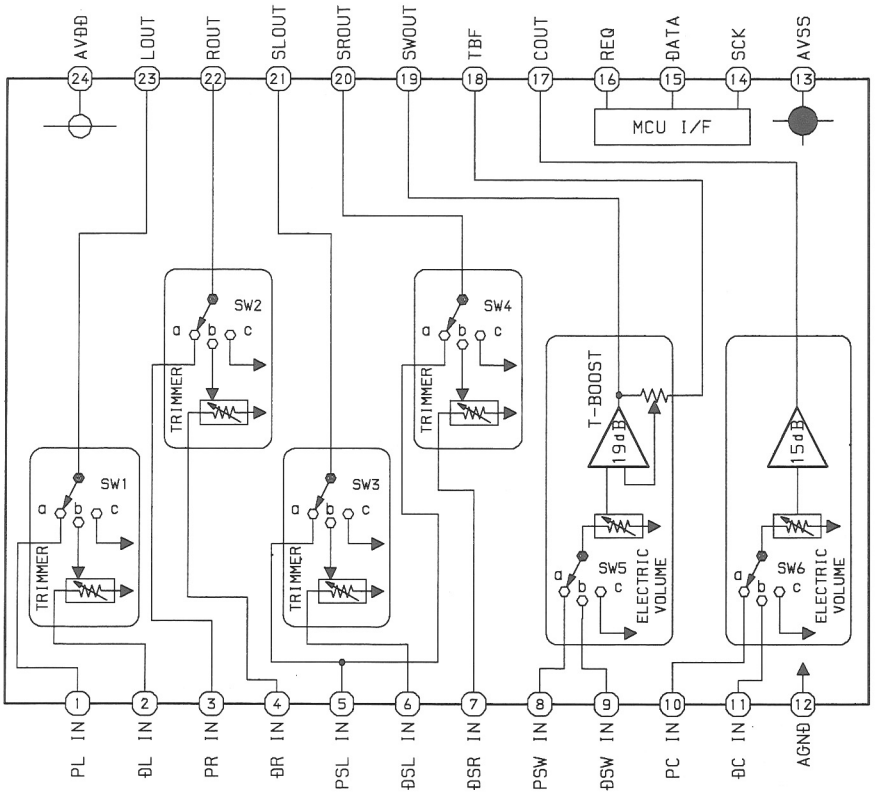
IC, M62445AFP



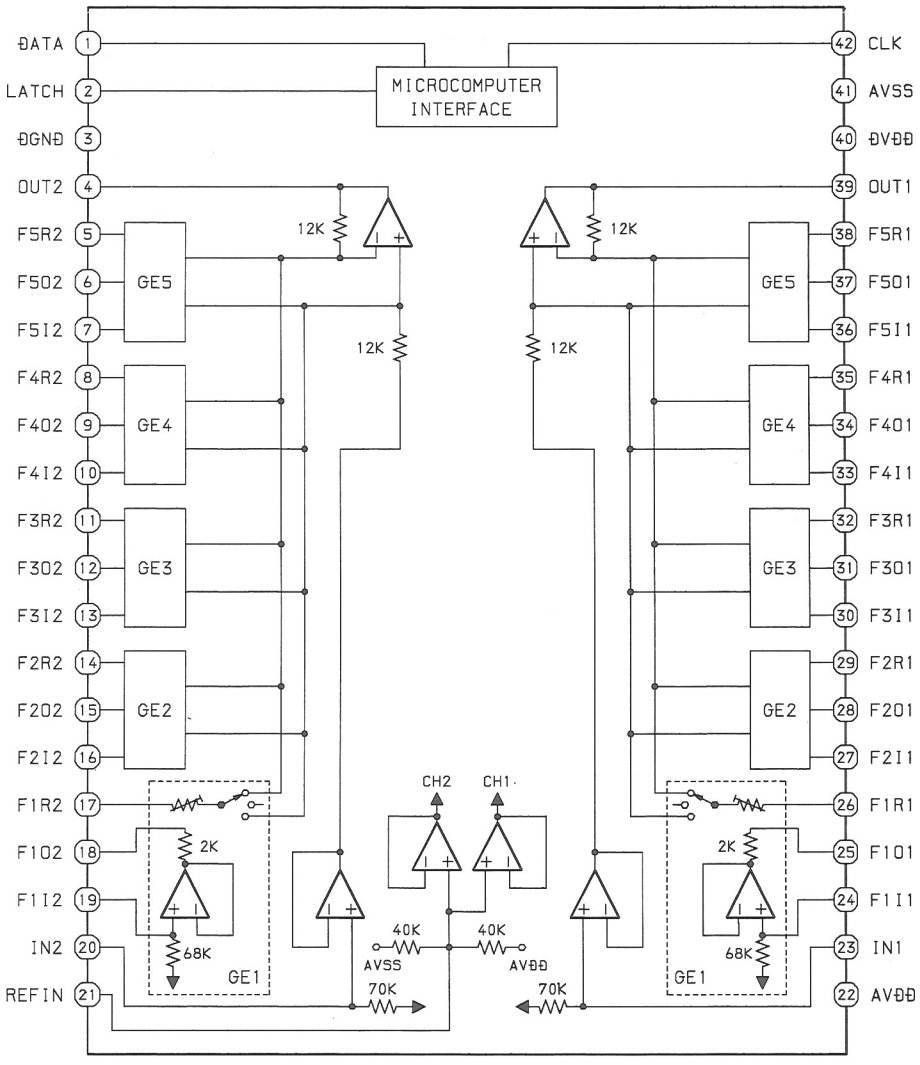
IC, M62463AFP



IC, M62491FP



IC, M62449FP



IC DESCRIPTION (MX-NH1100 / NAVH1200)

IC, UPD780228GF-034-3BA

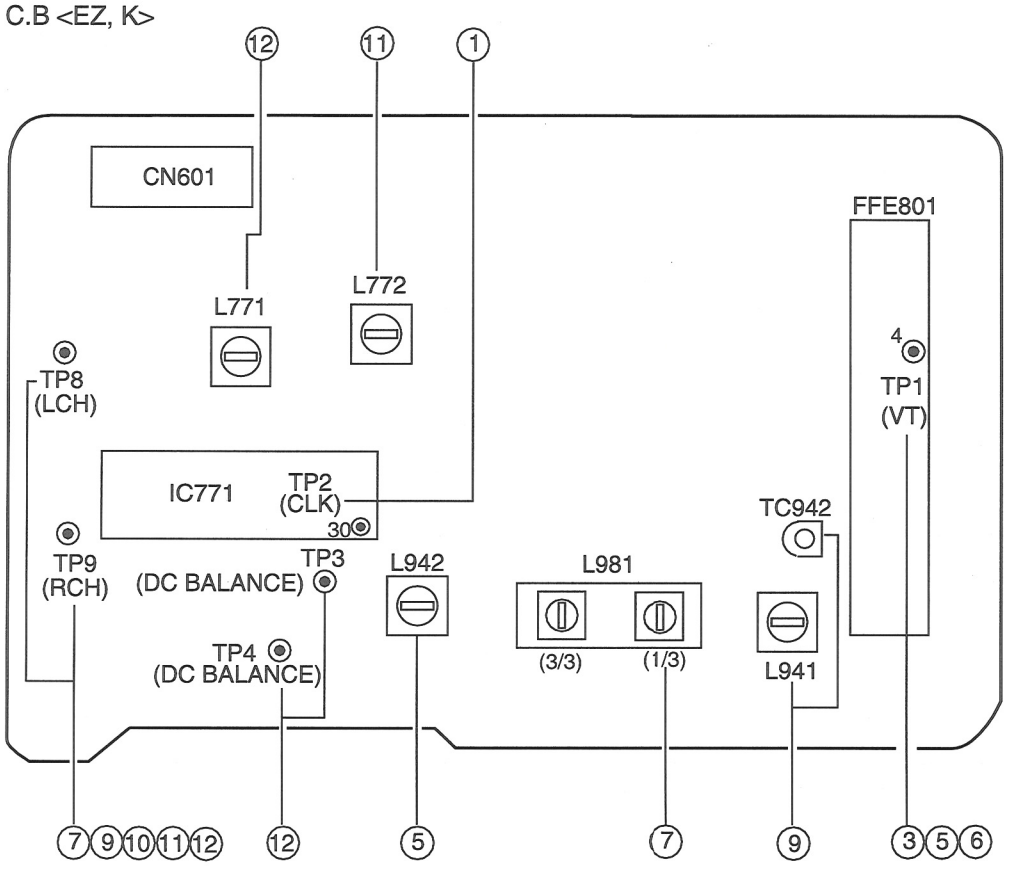
Pin No.	Pin Name	I/O	Description
1	K-SCAN	O	Output scan for segment input (Active "H").
2	RHYTHM-CS	O	Chip select output to IC, BU9990-03.
3	RHYTHM-SCLK	O	Clock output to IC, BU9990-03.
4	RHYTHM-SD	O	Data output to IC, BU9990-03.
5	PLL CE	O	PLL IC chip enable output.
6	O-M/CLK	O	Main clock output.
7	O-M/DATA	O	Main data output.
8	O-M/STB	O	Main strobe output.
9	I/O-SERIAL	I/O	Communication port for GEQ, CD and DECK.
10	O-MUTE	O	System mute (ON when "H").
11	$\overline{\text{O-POWER}}$	O	System power supply (ON when "L").
12	DIMER 2	O	Dimmer control ("L" when 2).
13	O-MUTE S	O	Sound L, R, Center, SW Mute.
14	LED-ECO	O	ECO LED output.
15	NC	–	Not connected.
16	NC	–	Not connected.
17	IC	–	Connect to GND.
18	VSS	–	GND.
19	VDD	–	Power supply terminal.
20	LED-MD	O	MD LED output.
21	TM BASE	I	Time base input.
22	TUNE/$\overline{\text{IFO}}$	I	Tuning detection input.
23	$\overline{\text{STEREO}}$	I	Stereo detection input.
24	NC	–	Not connected.
25	I-RE VOL A	I	Rotary Encoder Input A / B.
26	I-RE VOL B		
27	LED CD	O	CD LED output.
28	NC	–	Not connected.
29	I-RDS-CLK	I	RDS clock input.
30	$\overline{\text{RESET}}$	I	Reset input.
31	I-RDS-DATA	I	RDS data input.
32	GEQ-REQ	O	Latch output to IC, M62449FP.
33	COUNTER	I	Tape counter input.
34	$\overline{\text{I-RMC}}$	I	Remote controller input (Active "L").
35	$\overline{\text{I-SURR-OFF}}$	I	Stop surround function when using head phone.
36	O-SHIFT	O	Output for oscillated frequency shift.
37	VDD	–	Power supply terminal.
38	X2	–	4.19MHz oscillator circuit.
39	X1		
40	VSS	–	GND
41	AVDD	–	Power supply terminal.
42	$\overline{\text{HOLD}}$	I	Power failure / over current detected input.

Pin No.	Pin Name	I/O	Description
43	I-RDS SIG	I	RDS signal input.
44	I-MIC	I	MIC input level detection.
45	I-KEY1	I	KEY1 input.
46	I-KEY2	I	KEY2 input.
47	TEMPO	I	TEMPO input (100Hz, 3.3kHz).
48	GE-2	I	DEMO, TIMER, CLOCK, SPICE A, AUTO SPICE / FILL IN input.
49	GE-1	I	JOG, SPICE B SW input.
50	AVSS	–	GND.
51	LED-TAPE	O	Tape LED output.
52	LED-TUNER	O	Tuner LED output.
53	LED-VIDEO	O	Video LED output.
54~58	P1~P5	O	FL segment output.
59	P6	I/O	FL segment output.
60	P7 / SEL2	I/O	FL segment output / SEL2 input <HR only>.
61	P8 / SEL1	I/O	FL segment output / SEL1 input <EZ,K only>.
62	P9 / PRO	I/O	FL segment output / PROLOGIC input.
63	P10 / w/o DEMO	I/O	FL segment output / Without DEMO input.
64	P11/V-CD	I/O	FL segment output / V-CD input.
65~78	P12~P25	O	FL segment output.
79	VDD	–	Power supply terminal.
80	-VFL	–	Power FL display negative supply terminal.
81~90	P26~P35	O	FL segment output.
91~100	G10~G1	O	FL grid output.

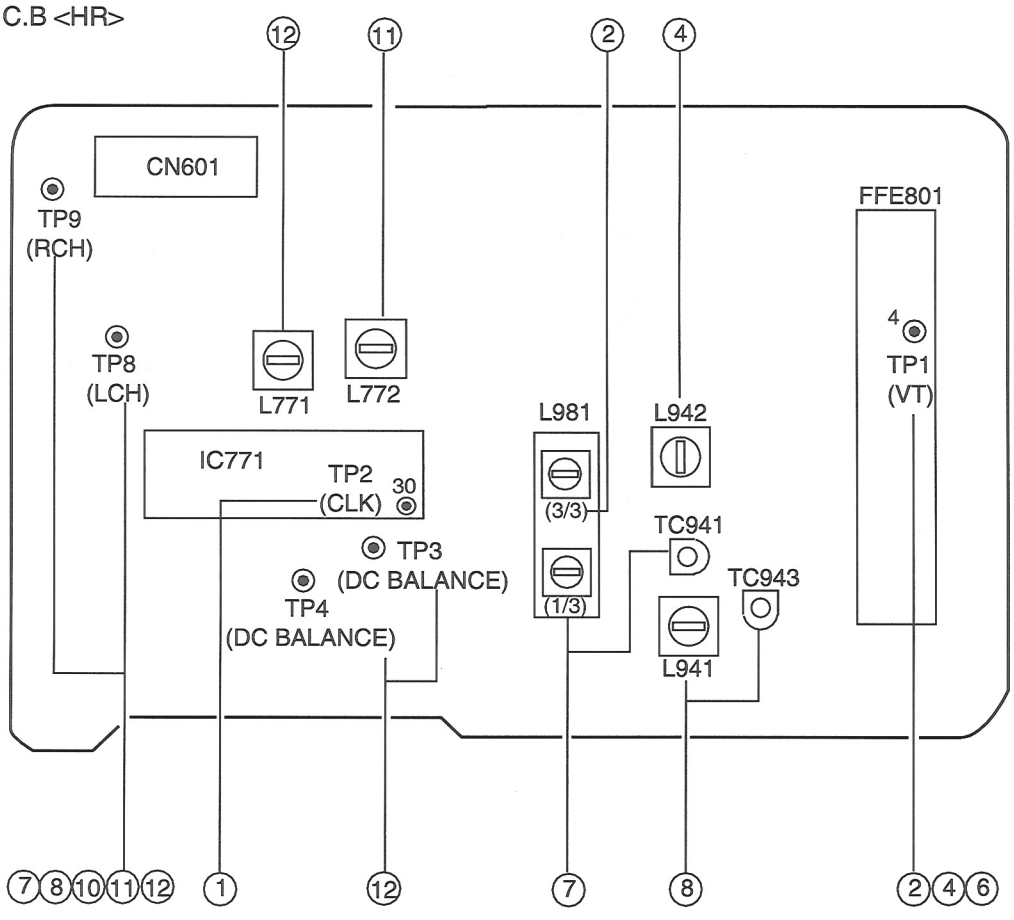
IC, M65849BFP631D

Pin No.	Pin Name	I/O	Description
1	MCLKONT	I	Controls buils-in clock generation circuit with external R.
2	TEST1	I	Test mode change "H" Normal / "L" Test.
3	CLOCK	I	Clock input via serial bus.
4.	STB	I	Strobe input via serial bus.
5	DATA	I	Data input via serial bus.
6	CKO	O	Clock output.
7	CKI	I	Clock input.
8	Vcc	–	Power supply.
9	DELAY SOURCE OUT	O	(L+R) or (L-R) or MIC signal output.
10	TEST OUT	O	Memory / Mute / Sampling data output (Test mode) (Not connected).
11	LPF1 IN 1	I	Low Pass Filter 1 input 1.
12	LPF1 IN 2	I	Low Pass Filter 1 input 2.
13	LPF1 OUT	O	Low Pass Filter 1 output.
14	AD INT IN	I	A/D integrator input.
15	AD INT OUT	I	A/D integrator output.
16	GND	–	GND.
17	DAINT IN	I	D/A integrator input.
18	DAINT OUT	O	D/A integrator output.
19	LPF2 IN 1	I	Low Pass Filter 2 input 1.
20	LPF2 IN 2	I	Low Pass Filter 2 input 2.
21	LPF2 OUT	O	Low Pass Filter 2 output.
22	FVOL IN	I	Feedback volume input.
23	MIC OUT	O	Microphone output.
24	REF	–	Reference.
25	Rch OUT	O	Rch mixing output.
26	Lch OUT	O	Lch mixing output.
27	DELAY OUT	O	Delay signal output.
28	Rch IN	I	Rch mixing input.
29	Lch IN	I	Lch mixing input.
30	VDD	–	VDD.
31	MIC IN	I	Microphone input.
32	MVOL IN	I	Mix volume input.

C TUNER C.B <EZ, K>



C TUNER C.B <HR>



< TUNER SECTION >

1. Clock frequency Check
   Settings : • Test point : TP2
   Method : Set to AM 1602kHz and check that the test point is 2052kHz ± 45Hz.

2. MW VT Adjustment <HR>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L981 (3/3)
   Method : Set to MW 1710kHz and adjust L981 (3/3) so that the test point becomes 7.5V ± 0.05V. Then check that the test point is more than 0.3V (530kHz).

3. MW VT Check <EZ,K>
   Settings : • Test point : TP1 (VT)
   Method : Set to MW 1602kHz and check that the test point is less than 8.0V and more than 0.6V (531kHz).

4. SW VT Adjustment <HR>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to SW 17.9MHz and adjust L942 so that the test point becomes 6.0V ± 0.05V. Then check that the test point is more than 0.3V (5.9MHz).

5. LW VT Adjustment <EZ,K>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point is 1.3V ± 0.05V. Then check that the test point is less then 8.0V (290kHz).

6. FM VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to FM 87.5MHz, 108.0MHz and check that the test point is more than 0.5V (87.5MHz) and less than 8.0V (108.0MHz).

7a. MW Tracking Adjustment <HR>
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L981 (1/3) 603kHz
   TC941 ..... 1404kHz
   Method : Set up TC941 to center before adjustment, the level at 603kHz is adjusted to maximum by L981 (1/3). Then the level at 1404kHz is adjusted to maximum by TC941.

7b. MW Tracking Adjustment <EZ,K>
   Settings : • Test point : TP8(Lch), TP8(Rch)
   • Adjustment location :
   L981(1/3) 999kHz
   Method : Set to AM 999kHz and adjust L981(1/3)to MAX.

8. SW Tracking Adjustment <HR>
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L941 ..... 5.9MHz
   TC943 ..... 17.9MHz
   Method : Set up TC943 to center before adjustment. The level at 5.9MHz is adjusted to maximum by L941. Then the level at 17.9MHz is adjusted to maximum by TC943.

9. LW Tracking Adjustment <EZ,K>
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L941 .....144kHz
   TC942 ..... 290kHz
   Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to maximum by L941. Then the level at 290kHz is adjusted to maximum by TC942.

10. FM Tracking Check
   Settings : • Test point : TP8(Lch), TP9(Rch)
   Method : Set to FM 98.0MHz and check that the test point is less than 9dB (HR), less than 13dB (EZ,K).

11. AM(MW) IF Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L772 .....450kHz

12. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3, TP4 (DC Balance)
   : TP8(Lch), TP9(Rch) (Distortion)
   • Adjustment location : L771
   • Input level : 54dB
   Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V. Next, check that the distortion is less than 1.3%.

PRACTICAL SERVICE FIGURE (MX-NH1100 / NAVH1200)

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity :	HR: Less than 10 / 9 / 9dB
(THD 3%)	EZ,K: Less than 14 / 13 / 13dB
	[at 87.5 / 98.0 / 108.0MHz]
S/N 50dB Quieting sensitivity :	
	HR: Less than 35dB
	EZ,K: Less than 38dB
	[at 98.0MHz]
Signal to noise ratio :	Mono : More than 72dB
	Stereo :
	HR: More than 66dB
	EZ,K: More than 64dB
	[at 98.0MHz]
Distortion :	Mono : Less than 1.2%
	Stereo : Less than 2.0% [at 98.0MHz]
Stereo separation :	HR : More than 12dB [at 98.0MHz]
	EZ,K : More than 30dB [at 98.0MHz]
Intermediate frequency :	10.7MHz

<MW SECTION>

Sensitivity :	Less than 62dB [at 603kHz]
	Less than 58dB [at 999kHz]
	Less than 58dB [at 1404kHz]
Signal to noise ratio :	More than 36dB [at 999kHz]
Distortion :	Less than 1.5% [at 999kHz]
Intermediate frequency :	450kHz

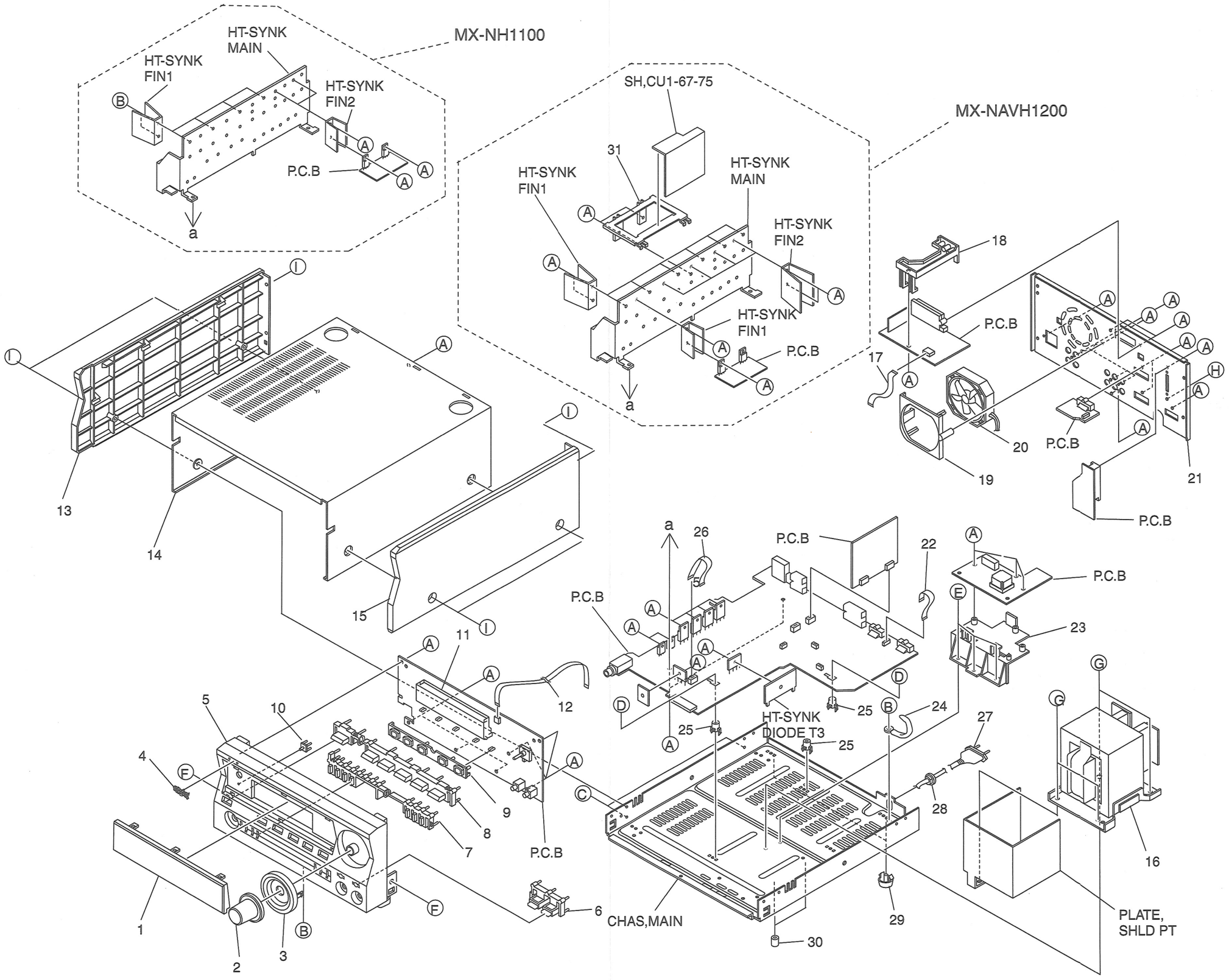
<LW SECTION> (EZ,K)

Sensitivity :	Less than 70dB [at 144kHz]
	Less than 68dB at 198kHz]
	Less than 66dB [at 290kHz]
Intermediate frequency :	450kHz

<SW SECTION> (HR)

Sensitivity :	Less than 51dB [at 5.9MHz]
	Less than 45dB [at 12.0 MHz]
	Less than 44dB [at 17.9MHz]
Overload Signal Distortion :	
	Less than 10% [at 12.0MHz]
Intermediate frequency :	450kHz

MECHANICAL EXPLODED VIEW 1 / 1 (MX-NH1100 / NAVH1200)



MECHANICAL PARTS LIST 1 / 1 (MX-NH1100 / NAVH1200)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-SPM-002-010		WINDOW,DISPLAY<1200HR>
1	8Z-SP1-004-010		WINDOW,DISPLAY<1100HR>
1	8Z-SP1-028-010		WINDOW,DISPLAY EZ<1100K,1100EZ>
1	8Z-SPM-009-010		WINDOW,DISPLAY EZ<1200K,1200EZ>
2	8Z-SP1-011-010		KNOB,RTRY VOL
3	8Z-SP1-012-010		RING,VOL
4	87-B00-002-010		BADGE,AIWA 30 ABS SIL
5	8Z-SP1-001-010		CABI,FR<1100HR>
5	8Z-SPM-001-010		CABI,FR EZ<1200K,1200EZ>
5	8Z-SP1-021-010		CABI,FR EZ<1100K,1100EZ>
5	8Z-SPM-005-010		CABI,FR HR<1200HR>
6	8Z-SP1-007-010		KEY,BBE
7	8Z-SP1-008-010		KEY,KARAOKE<HR>
7	8Z-SP1-016-110		KEY,RDS<K,EZ>
8	8Z-SP1-010-010		KEY,ASSY FUN
9	8Z-SP1-202-010		GUIDE,LED FUN
10	8Z-SP1-015-010		REFLECTOR,ECO
11	88-SX1-203-210		GUIDE,FL
12	88-908-281-110		FF-CABLE, 8P 1.25 280MM<1100>
12	88-906-301-110		FF-CABLE,6P-1.25<1200>
13	8Z-SP1-017-010		PANEL,SIDE L
14	8Z-SP1-002-010		CABI,STEEL
15	8Z-SP1-018-010		PANEL,SIDE R
⚠ 16	88-SPM-604-010		PT,EZ<1200K,1200EZ>
⚠ 16	88-SPM-602-010		PT,HE<1200HR>
⚠ 16	88-SP1-604-010		PT,EZ<1100EZ>
⚠ 16	88-SP1-602-010		PT,HE<1100HR>
⚠ 16	88-SP1-606-010		PT,K<1100K>
17	88-911-121-110		FF-CABLE,11P 1.25
18	88-AR1-203-010		HLDR,TU
19	8Z-SP1-207-010		COVER, FAN
20	87-A91-232-010		FAN,F614R-12MC-22-350MM
21	8Z-SPM-003-010		PANEL,REAR EZ<1200EZ>
21	8Z-SP1-022-010		PANEL,REAR EZSNM<1100EZ>
21	8Z-SP1-003-010		PANEL,REAR HR<1100HR>
21	8Z-SPM-008-010		PANEL,REAR HR<1200HR>
21	8Z-SPM-006-110		PANEL,REAR K<1200K>
21	8Z-SP1-026-010		PANEL,REAR KSNM<1100K>
22	88-910-071-110		FF-CABLE, 10P 1.25 70MM
23	8Z-SP1-209-010		HLDR,PWB ECO
24	87-064-185-010		HLDR,WIRE
25	8Z-SP1-208-010		HLDR,PWB 13.5
26	8Z-SP1-627-010		F-CABLE,7P 2.5 280MM
⚠ 27	87-A80-143-010		AC-CORD ASSY,E<1200K>
⚠ 27	87-050-079-010		AC-CORD ASSY,E<EXCEPT 1200K>
28	87-085-185-010		BUSHING, AC CORD (E)
29	87-085-213-010		FOOT,H12.5
30	8Z-NB8-240-010		COVER, PL
31	88-SPM-208-010		HLDR,PWB PRO<1200>
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-067-688-010		BVTT+3-6
C	87-721-095-410		QT2+3-8GLD W/O SLOT
D	87-B10-190-010		BVT2+3-22 W/O SLOT
E	87-067-579-010		BVT2+3-8 W/O SLOT
F	87-591-094-410		TAPPING SCREW, QIT+3-6
G	87-078-019-010		S-SCREW,IT+4-6
H	81-653-215-010		SPECIAL SCREW, VT2.6-8<HR>
I	87-067-641-010		UTT2+3-8(W/O SLOT)BL

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

MODEL NO.

DX-NH1100

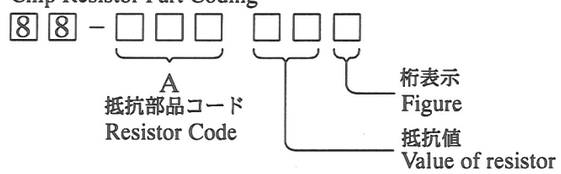
ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

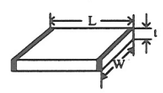
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8Z-SX1-607-010		C-IC,UPD78046HGF-024-3B9
TRANSISTOR			
	87-026-263-080		C-TR,RN1410
	87-A30-076-080		C-TR,2SC3052F
DIODE			
	87-020-465-080		DIODE,1SS133 (110MA)
	87-070-136-080		ZENER,MTZJ5.1B
MAIN C.B			
C301	87-010-322-080		C-CAP,S 100P-50 CH
C304	87-010-196-080		CHIP CAPACITOR,0.1-25
C305	87-010-197-080		CAP, CHIP 0.01 DM
C310	87-016-462-080		C-CAP,S 1-16 F
C311	87-016-462-080		C-CAP,S 1-16 F
C312	87-016-462-080		C-CAP,S 1-16 F
C313	87-010-184-080		CHIP CAPACITOR 3300P(K)
C314	87-010-402-040		CAP,E 2.2-50 SME
CN301	87-009-241-010		CONNECTOR, 11P
CN302	87-099-194-010		CONN,6P 6216V
CN303	87-099-015-010		CONN,13P 6216V
CN304	87-099-667-010		CONN,8P TUC-P8P-B1
CN305	87-099-570-010		CONN,13P TUC-P13P-B1
FB301	87-008-372-080		FILTER, EMI BL OIRNI
FB302	87-008-372-080		FILTER, EMI BL OIRNI
FB303	87-008-372-080		FILTER, EMI BL OIRNI
FB304	87-008-372-080		FILTER, EMI BL OIRNI
FB305	87-008-372-080		FILTER, EMI BL OIRNI
FB306	87-008-372-080		FILTER, EMI BL OIRNI
FB307	87-008-372-080		FILTER, EMI BL OIRNI
L301	87-005-152-080		COIL,10UH
L302	87-005-165-080		COIL 1UH (H,E)
W301	88-SX1-610-010		CORD,FG 11P
W302	88-906-481-110		FF-CABLE,6P 1.25 480MM
W303	88-913-121-110		FF-CABLE,P1.25
FRONT C.B			
C1	87-010-264-040		CAP,E 100-10 5L
C2	87-010-072-040		CAP,E 2.2-50 5L
C4	87-010-246-040		CAP,E 47-35 SME
C5	87-010-190-080		S CHIP F 0.01
C6	87-010-196-080		CHIP CAPACITOR,0.1-25
C7	87-010-197-080		CAP, CHIP 0.01 DM
C8	87-010-314-080		C-CAP,S 22P-50V
C9	87-010-316-080		C-CAP,S 33P-50 CH
C10	87-010-315-080		C-CAP,S 27P-50 CH
C11	87-010-196-080		CHIP CAPACITOR,0.1-25
C12	87-010-197-080		CAP, CHIP 0.01 DM
C14	87-010-405-040		CAP,E 10-50
C15	87-010-405-040		CAP,E 10-50
C201	87-018-134-080		CAPACITOR,TC-U 0.01-16
C202	87-010-197-080		CAP, CHIP 0.01 DM
C203	87-010-197-080		CAP, CHIP 0.01 DM
C204	87-018-134-080		CAPACITOR,TC-U 0.01-16
C251	87-010-178-080		CHIP CAP 1000P
C252	87-010-178-080		CHIP CAP 1000P
C253	87-010-178-080		CHIP CAP 1000P
C254	87-010-178-080		CHIP CAP 1000P
C255	87-010-178-080		CHIP CAP 1000P
C256	87-010-178-080		CHIP CAP 1000P
CN1	87-099-669-010		CONN,8P TUC-P8X-B1
CN2	87-099-559-010		CONN,13P TUC-P13X-B1
FL201	8Z-SX1-608-010		FL,6-BT-303GNK
L1	87-005-152-080		COIL,10UH
L2	87-005-152-080		COIL,10UH
L3	87-005-152-080		COIL,10UH
L5	87-005-152-080		COIL,10UH
LED203	87-A40-263-080		LED,SLH-56PCT31 GRN
LED204	87-A40-263-080		LED,SLH-56PCT31 GRN
LED205	87-A40-317-080		LED,SLR-342VCT31 RED
LED206	87-A40-317-080		LED,SLR-342VCT31 RED
LED207	87-A40-317-080		LED,SLR-342VCT31 RED
S201	87-A90-095-080		SW,TACT EVQ11G04M
S202	87-A90-095-080		SW,TACT EVQ11G04M
S203	87-A90-095-080		SW,TACT EVQ11G04M
S204	87-A90-095-080		SW,TACT EVQ11G04M
S205	87-A90-095-080		SW,TACT EVQ11G04M
S206	87-A90-095-080		SW,TACT EVQ11G04M
S207	87-A90-095-080		SW,TACT EVQ11G04M
S208	87-A90-095-080		SW,TACT EVQ11G04M
X1	87-A70-075-080		VIB,CER 4.19MHZ CRHF
KEY C.B			
S101	87-A90-095-080		SW,TACT EVQ11G04M
S102	87-A90-095-080		SW,TACT EVQ11G04M

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

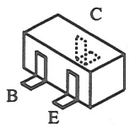
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

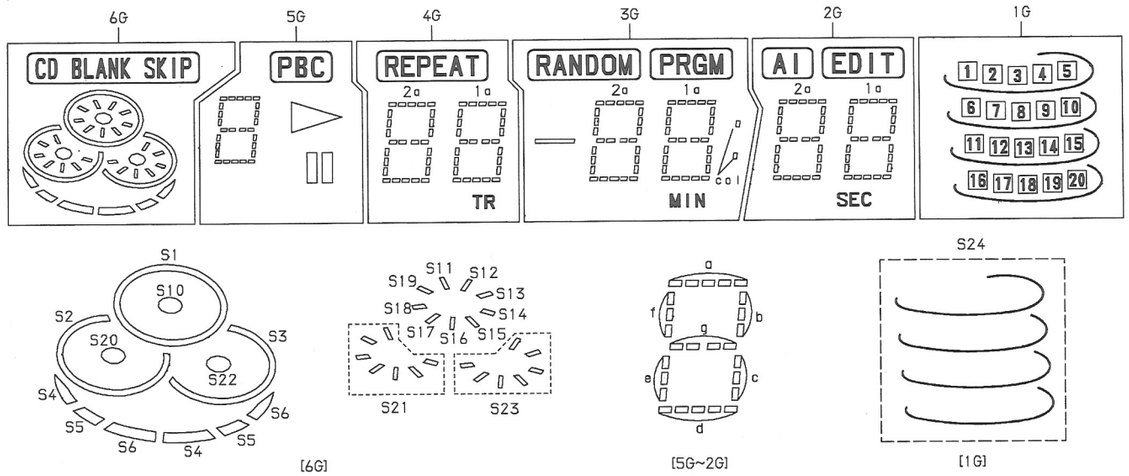
TRANSISTOR ILLUSTRATION (DX-NH1100)



2SC3052
RN1410

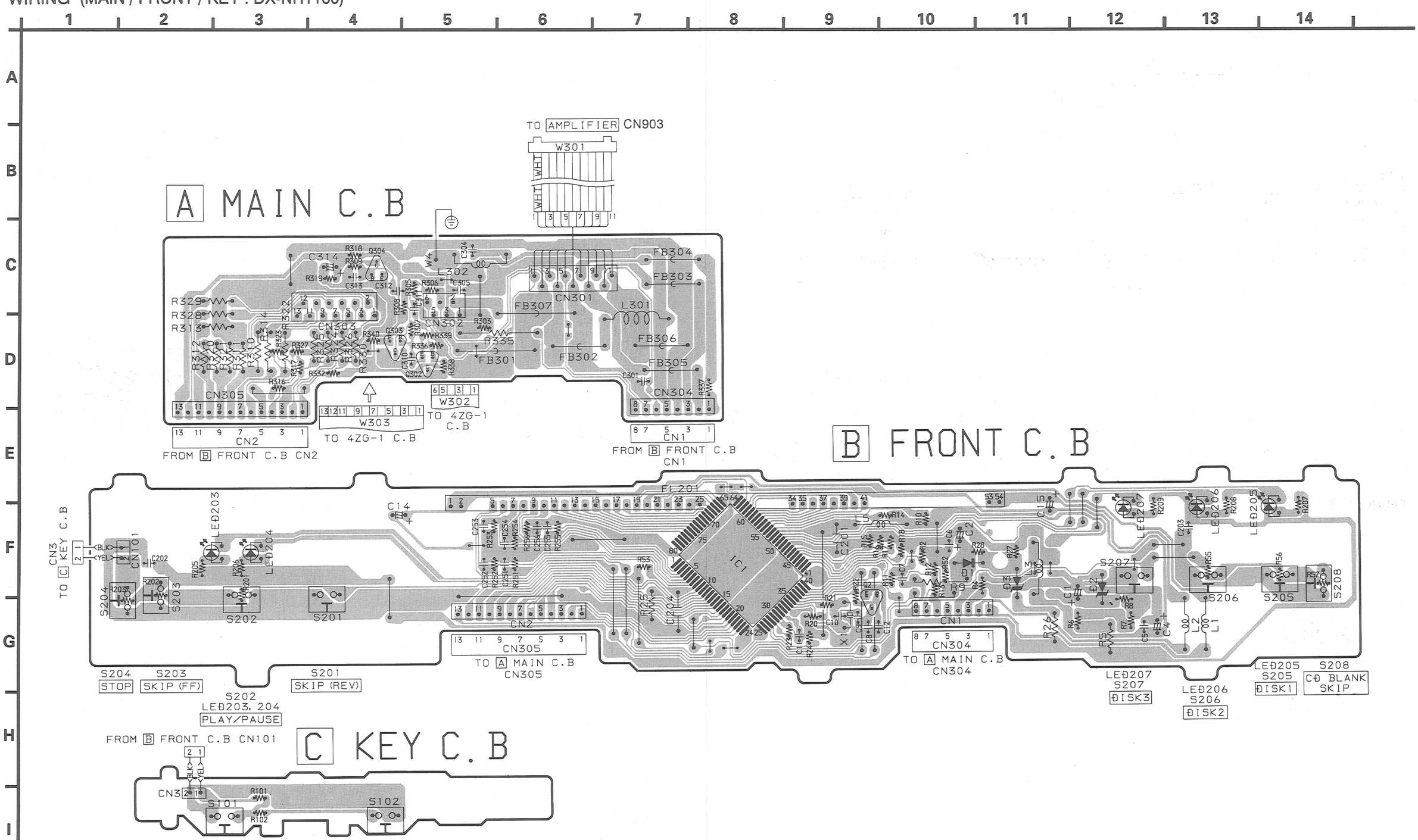
FL (6-BT-303GNK) GRID ASSIGNMENT & ANODE CONNECTION (DX-NH1100)

GRID ASSIGNMENT & ANODE CONNECTION (DX-NH1100)

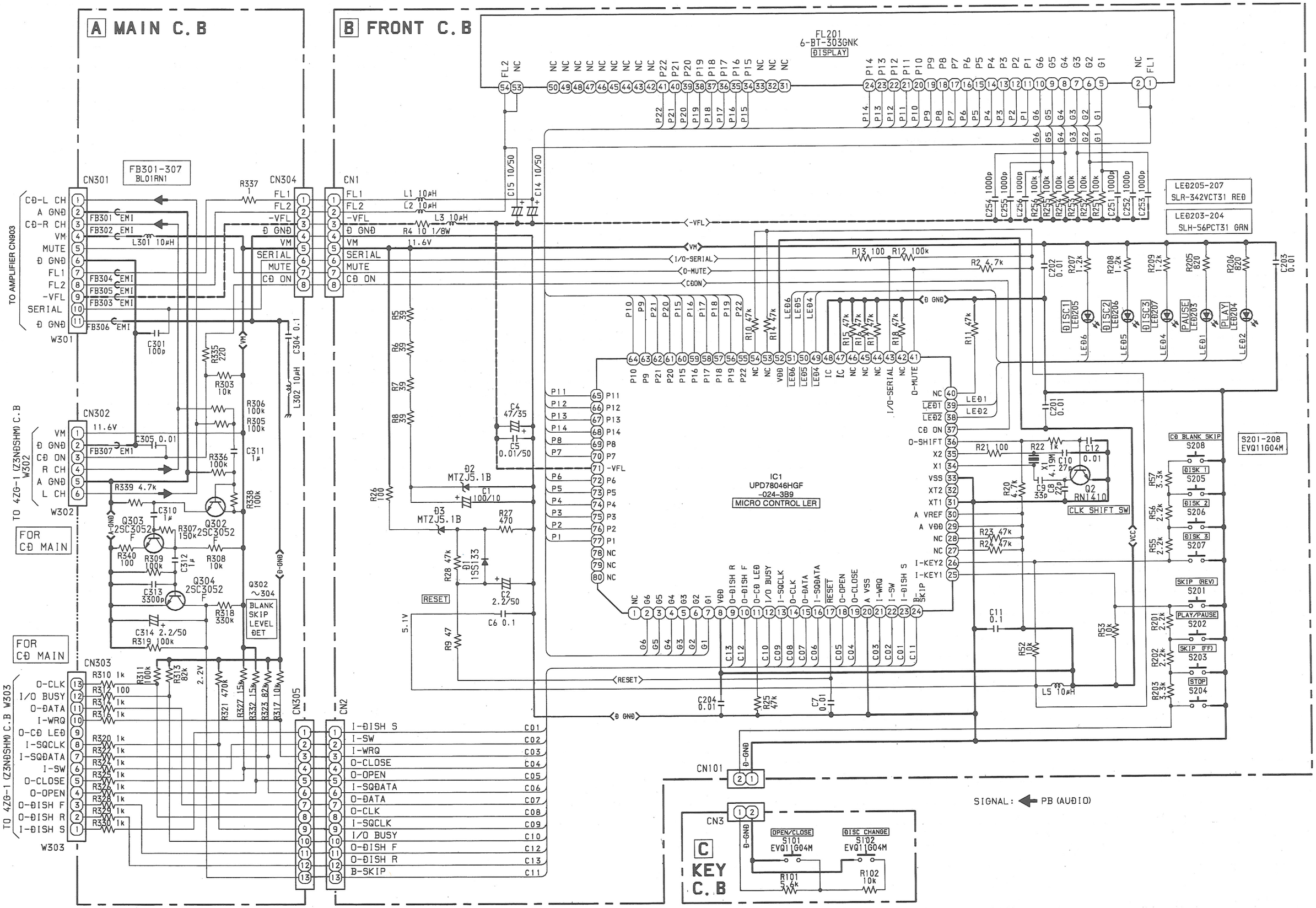


ANODE CONNECTION

	6G	5G	4G	3G	2G	1G
P1	S10	a	1a	1a	1a	1
P2	S12	b	1b	1b	1b	2
P3	S11	f	1f	1f	1f	3
P4	S13	g	1g	1g	1g	4
P5	S19	c	1c	1c	1c	5
P6	S14	e	1e	1e	1e	6
P7	S18	d	1d	1d	1d	7
P8	S15	–	–	▭	—	8
P9	S17	▷	2a	2a	2a	9
P10	S16	▯▯	2b	2b	2b	10
P11	S1	–	2f	2f	2f	11
P12	S20	–	2g	2g	2g	12
P13	S21	–	2c	2c	2c	13
P14	S2	–	2e	2e	2e	14
P15	S22	–	2d	2d	2d	15
P16	S23	–	TR	MIN	SEC	16
P17	S3	PBC	REPEAT	col	EDIT	17
P18	S4	(PBC)	(REPEAT)	PRGM	(EDIT)	18
P19	S5	–	–	(PRGM)	AI	19
P20	S6	–	–	RANDOM	(AI)	20
P21	CD BLANK SKIP	–	–	(RANDOM)	–	S24
P22	(CD BLANK SKIP)	–	–	–	–	–


TO AMPLIFIER CN903
W301
A MAIN C.B
CN303
CN305
CN2
FROM B FRONT C.B CN2
W303
TO 4ZG-1 C.B
W302
TO 4ZG-1 C.B
CN301
CN302
CN304
CN1
FROM B FRONT C.B CN1
B FRONT C.B
FL201
IC1
CN2
CN305
TO A MAIN C.B CN305
CN304
TO A MAIN C.B CN304
CN3
TO C KEY C.B
S204 STOP
S203 SKIP (FF)
S202 LED203, 204 PLAY/PAUSE
S201 SKIP (REV)
LED207 S207 DISK3
LED206 S206 DISK2
LED205 S205 DISK1
S208 CD BLANK SKIP
FROM B FRONT C.B CN101
C KEY C.B
CN3
S101
S102

SCHEMATIC DIAGRAM – 10 (MAIN / FRONT / KEY : DX-NH1100)



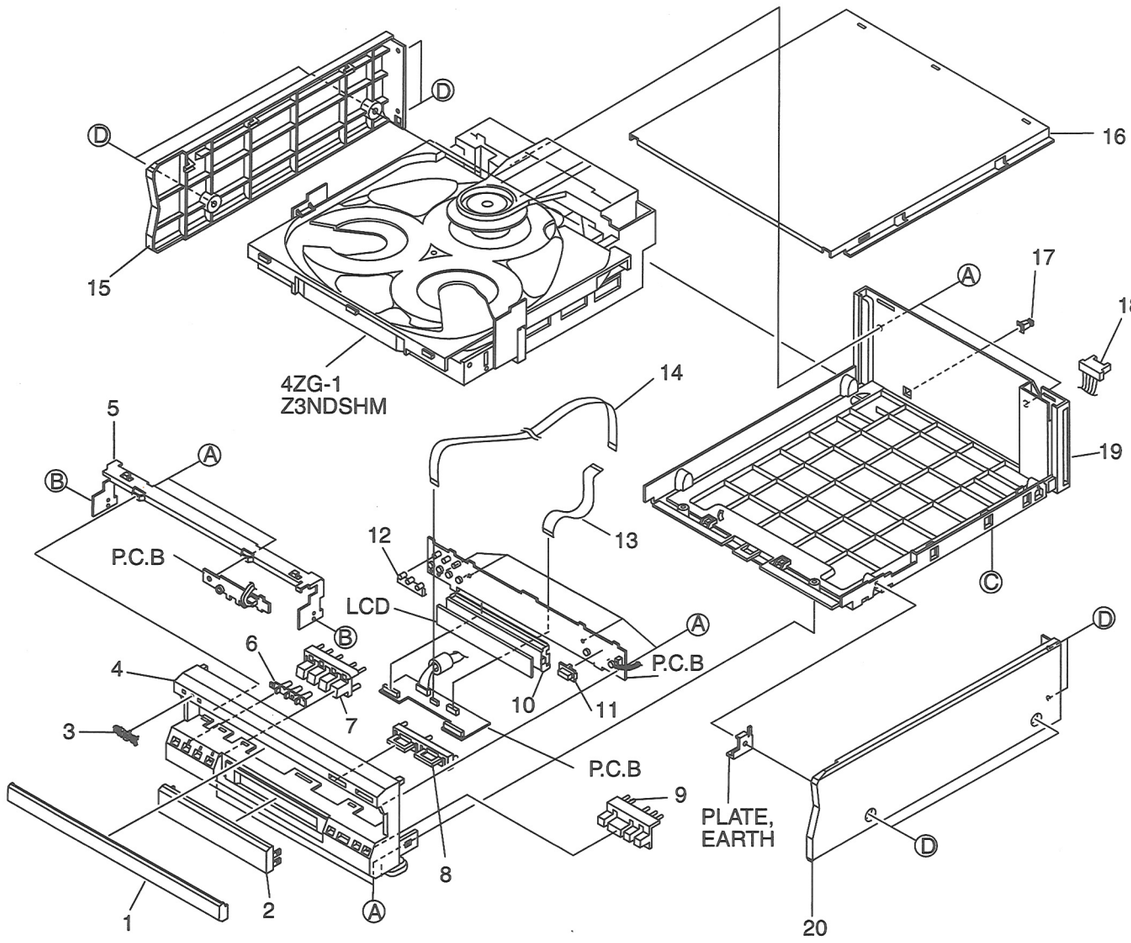
IC DESCRIPTION (DX-NH1100)

IC, UPD78046HGF-032-3B9

Pin No.	Pin Name	I/O	Description
1	NC	–	Not connected.
2~7	G6~G1	O	FL grid output G6~G1.
8	VDD	–	Power supply terminal.
9	O-DISH R	O	CD turntable reverse rotation output.
10	O-DISH F	O	CD turntable forward rotation output.
11	O-CD LED	O	CD flash window LED ON/OFF output.
12	I/O BUSY	I/O	DSP serial latch output.
13	I-SQCLK	I	DSP SUB Q read-out clock output.
14	O-CLK	O	CD clock output.
15	O-DATA	O	CD data output.
16	I-SQDATA	I	DSP serial data input.
17	$\overline{\text{RESET}}$	I	Reset input.
18	O-TRYOPN	O	CD tray open output.
19	O-TRYCLS	O	CD tray close output.
20	A VSS	–	GND.
21	I-WRQ	I	CD WRQ input.
22	I-SW	I	CD motor key switch A/D input.
23	I-DISH S	I	CD turntable photo sensor A/D input.
24	B-SKIP	I	BLANK SKIP A/D input.
25	I-KEY1	I	Key1 A/D input.
26	I-KEY2	I	Key2 A/D input.
27	NC	–	Not used.
28	NC	–	Not used.
29	A VDD	–	Power supply terminal.
30	A VREF	–	Power supply terminal.
31	XT1	–	Connect to GND.
32	XT2	–	Connect to GND.
33	VSS	–	GND.
34	X1	–	4.19MHz oscillator circuit.
35	X2		
36	O-SHIFT	O	Micro controller clock shift output. (Shift when "L").
37	O-CD ON	O	Power supply output for CD circuit ("H": ON).
38	$\overline{\text{LED-2}}$	O	Play LED output.
39	$\overline{\text{LED-1}}$	O	Pause LED output.
40	NC	–	Not used.
41	O-MUTE	O	CD Audio mute output.
42	NC	–	Not used.
43	I/O-SERIAL	I/O	Serial data input / output.
44~46	NC	–	Not used.
47,48	IC	–	Connect to GND.
49	$\overline{\text{LED4}}$	O	Disc1 LED output.
50	$\overline{\text{LED5}}$	O	Disc2 LED output.

Pin No.	Pin Name	I/O	Description
51	$\overline{\text{LED6}}$	O	Disc3 LED output.
52	VDD	–	Power supply terminal.
53	NC	–	Not used.
54	NC	–	Not used.
55	P22 (O-SEG V)	O	FL segment output P22.
56	P19 (O-SEG S)	O	FL segment output P19.
57	P18 (O-SEG R)	O	FL segment output P18.
58	P17 (O-SEG Q)	O	FL segment output P17.
59	P16 (O-SEG P)	O	FL segment output P16.
60	P15 (O-SEG O)	O	FL segment output P15.
61	P20 (O-SEG T)	O	FL segment output P20.
62	P21 (O-SEG U)	O	FL segment output P21.
63	P9 (O-SEG I)	O	FL segment output P9.
64	P10 (O-SEG J)	O	FL segment output P10.
65	P11 (O-SEG K)	O	FL segment output P11.
66	P12 (O-SEG L)	O	FL segment output P12.
67	P13 (O-SEG M)	O	FL segment output P13.
68	P14 (O-SEG N)	O	FL segment output P14.
69, 70, 72~77	P8~1 (O-SEG H~A)	O	FL segment output P8~P1.
71	-VFL	–	FL display negative supply terminal.
78~80	NC	–	Not connected.

MECHANICAL EXPLODED VIEW 1 / 1 (DX-NH1100)



MECHANICAL PARTS LIST 1 / 1 (DX-NH1100)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-SX1-002-010		PANEL,TRAY
2	8Z-SX1-003-010		WINDOW,CD
3	87-B00-002-010		BADGE,AIWA 30 ABS SIL
4	8Z-SX1-001-010		CABI,FR
5	8Z-SX1-201-010		HLDR,CD
6	8Z-SX1-009-010		REFLECTOR,DISC
7	8Z-SX1-005-010		KEY,DISC
8	8Z-SX1-004-010		KEY,OPEN
9	8Z-SX1-008-010		KEY,ASSY OPE
10	88-SX1-203-210		GUIDE,FL
11	8Z-SX1-202-010		GUIDE,LED OPE
12	8Z-SX1-203-010		GUIDE,LED DISC
13	88-913-121-110		FF-CABLE,P1.25
14	88-906-481-110		FF-CABLE, 6P 1.25 480MM
15	8Z-SX1-011-010		PANEL,SIDE L
16	8Z-SX1-013-010		CABI,STEEL
17	84-ZG1-245-210		CAP,OPTICAL
18	88-SX1-610-010		CORD,FG 11P
19	8Z-SX1-016-010		CABI,REAR YJSM<YJ>
19	8Z-SX1-017-010		CABI,REAR YSM<Y>
20	8Z-SX1-012-010		PANEL,SIDE R
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-721-097-410		QT2+3-12 GLD
C	87-067-633-010		TAPPING SCREW, BVT2+3-8
D	87-B10-091-010		UTT2+3-10 W/O BLK

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

MODEL NO.

FX-NH1100

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-455-010		IC,HA12211
	87-A20-355-010		IC,CXA1553P
	8Z-SW1-608-040		IC,M38503M4-094FP T4
	87-020-454-010		IC,DN6851
TRANSISTOR			
	87-A30-087-080		C-FET,2SK2158
	87-A30-074-080		C-TR,RT1P 141C
	87-026-610-080		TR,KTC3198GR
	87-A30-073-080		C-TR,RT1N 141C
	87-A30-076-080		C-TR,2SC3052F
	89-112-965-080		TR,2SA1296 (0.75W)
	87-A30-085-070		C-TR,CSA1362GR
	89-318-155-080		TR,2SC1815 (0.4W)
	89-332-665-080		TR,2SC3266GR<YJSM>
	87-A30-164-080		TR,CSC2001K<YSM>
	87-026-263-080		C-TR,RN1410
	87-A30-071-080		C-TR,RT1N 144C
	87-026-463-080		TR,2SA933SRS
DIODE			
	87-A40-269-080		C-DIODE,MC2836
	87-020-465-080		DIODE,1SS133 (110MA)
	87-017-931-080		ZENER,MTZJ5.6B
MAIN C.B			
C301	87-010-318-080		C-CAP,S 47P-50 CH
C302	87-010-318-080		C-CAP,S 47P-50 CH
C303	87-012-157-080		C-CAP,S 330P-50 CH
C304	87-012-157-080		C-CAP,S 330P-50 CH
C305	87-012-145-080		CAP, CHIP S 270P CH
C306	87-012-145-080		CAP, CHIP S 270P CH
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C311	87-010-198-080		CAP, CHIP 0.022
C312	87-010-198-080		CAP, CHIP 0.022
C313	87-010-180-080		C-CER 1500P
C314	87-010-180-080		C-CER 1500P
C315	87-010-178-080		CHIP CAP 1000P<YSM>
C316	87-010-178-080		CHIP CAP 1000P<YSM>
C317	87-012-142-080		CAP, S 0.33-16
C318	87-012-142-080		CAP, S 0.33-16
C319	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C320	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C321	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C322	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C324	87-010-260-080		CAP, ELECT 47-25V
C325	87-010-370-080		CAP,E 330-6.3 SME
C327	87-010-404-080		CAP, ELECT 4.7-50V
C328	87-010-404-080		CAP, ELECT 4.7-50V
C332	87-010-196-080		CHIP CAPACITOR,0.1-25
C335	87-010-401-080		CAP, ELECT 1-50V
C336	87-010-401-080		CAP, ELECT 1-50V
C337	87-010-196-080		CHIP CAPACITOR,0.1-25
C339	87-010-196-080		CHIP CAPACITOR,0.1-25
C340	87-010-196-080		CHIP CAPACITOR,0.1-25
C351	87-012-140-080		CAP 470P
C352	87-012-140-080		CAP 470P
C354	87-010-175-080		CAP 560P<YSM>
C355	87-010-178-080		CHIP CAP 1000P<YSM>
C356	87-010-260-080		CAP, ELECT 47-25V
C357	87-010-197-080		C-CAP,S 0.01-25 KB C2012
C358	87-010-183-080		C-CAP,S 2700P-50 B
C359	87-010-183-080		C-CAP,S 2700P-50 B
C360	87-010-183-080		C-CAP,S 2700P-50 B
C370	87-010-196-080		CHIP CAPACITOR,0.1-25
C371	87-010-179-080		CAP,CHIP S B1200P
C372	87-010-179-080		CAP,CHIP S B1200P
C373	87-010-179-080		CAP,CHIP S B1200P
C374	87-010-179-080		CAP,CHIP S B1200P
C375	87-010-545-080		CAP, ELECT 0.22-50V
C376	87-010-545-080		CAP, ELECT 0.22-50V
C378	87-010-196-080		CHIP CAPACITOR,0.1-25
C381	87-010-197-080		C-CAP,S 0.01-25 KB C2012
C382	87-010-318-080		C-CAP,S 47P-50 CH
C383	87-010-197-080		C-CAP,S 0.01-25 KB C2012
C384	87-010-403-080		CAP, ELECT 3.3-50V
C385	87-010-184-080		CHIP CAPACITOR 3300P(K)
C386	87-010-196-080		CHIP CAPACITOR,0.1-25
C399	87-010-197-080		CAP, CHIP 0.01 DM<YSM>
C601	87-015-997-090		CAP,E 2200-16 SME
C602	87-010-381-080		CAP, ELECT 330-16V
C603	87-010-101-080		CAP, ELECT 220-16
C604	87-010-237-080		CAP, ELECT 1000-16V
C605	87-010-198-080		CAP, CHIP 0.022
C606	87-010-404-080		CAP, ELECT 4.7-50V
C607	87-010-263-080		CAP, ELECT 100-10V
C609	87-010-196-080		CHIP CAPACITOR,0.1-25
C610	87-010-318-080		C-CAP,S 47P-50 CH
C611	87-010-312-080		C-CAP,S 15P-50 CH
C612	87-010-315-080		C-CAP,S 27P-50 CH
C613	87-010-404-080		CAP, ELECT 4.7-50V
C614	87-010-197-080		CAP, CHIP 0.01 DM
CN301	87-049-919-010		CONN,3P EH V WHT
CN501	87-099-750-010		CONN,15P V 9604SC
CN702	87-A60-062-010		CONN,05P V 9604S-05C
CN704	87-A60-060-010		CONN,07P V 9604S-07C
FB301	87-008-372-080		FILTER, EMI BL OIRNI
FB601	87-008-372-080		FILTER, EMI BL OIRNI
FB602	87-008-372-080		FILTER, EMI BL OIRNI
FB603	87-008-372-080		FILTER, EMI BL OIRNI
FB604	87-A90-923-010		F-BEAD,8-13-14 E1314MRT
L301	87-A50-049-010		COIL,TRAP 85K(COI)
L302	87-A50-049-010		COIL,TRAP 85K(COI)
L351	87-007-342-010		COIL,OSC 85K BIAS
L601	87-005-130-080		COIL,10UH
L603	87-005-130-080		COIL,10UH
PIN301	87-099-827-010		CONN,3P S2M-3W
PIN351	87-099-832-010		CONN,8P S2M-8W
SFR301	87-024-355-080		SFR,33K DIA6 H
SFR302	87-024-355-080		SFR,33K DIA6 H
SFR303	87-024-355-080		SFR,33K DIA6 H
SFR304	87-024-355-080		SFR,33K DIA6 H
SFR305	87-024-356-080		SFR,47K DIA6 H
SFR306	87-024-356-080		SFR,47K DIA6 H
SFR351	87-024-356-080		SFR,47K DIA6 H
SFR352	87-024-356-080		SFR,47K DIA6 H
W601	88-SW1-607-010		CORD,FG9P
X601	87-A70-120-080		VIB,8.00MHZ MTZ-TF01
FRONT-1 C.B			
CN701	87-A60-062-010		CONN,05P V 9604S-05C
D701	87-070-278-010		LED,SLZ-738A-24-S
D702	87-002-787-080		LED,SEL 6215S RED
S701	87-A90-095-080		SW,TACT EVQ11G04M
S702	87-A90-095-080		SW,TACT EVQ11G04M
S703	87-A90-095-080		SW,TACT EVQ11G04M
S704	87-A90-095-080		SW,TACT EVQ11G04M
FRONT-2 C.B			
CN703	87-A60-060-010		CONN,07P V 9604S-07C
D711	87-A40-496-040		LED,SLR-342MCT31 GRN
D712	87-A40-496-040		LED,SLR-342MCT31 GRN
D713	87-A40-496-040		LED,SLR-342MCT31 GRN
D714	87-070-278-010		LED,SLZ-738A-24-S
S711	87-A90-095-080		SW,TACT EVQ11G04M
S712	87-A90-095-080		SW,TACT EVQ11G04M
S713	87-A90-095-080		SW,TACT EVQ11G04M
S714	87-A90-095-080		SW,TACT EVQ11G04M
S715	87-A90-095-080		SW,TACT EVQ11G04M
HEAD-1 C.B			
	85-ZM3-602-010		PWB, FLEX A
HEAD-2 C.B			
	85-ZM3-602-010		PWB, FLEX A
DECK C.B			
CN502	87-099-756-010		CONN,15P 9604 S F
SFR1	87-024-581-089		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-010		SOL ASSY, 27
SOL2	82-ZM1-618-010		SOL ASSY, 27
SW1	87-A90-248-010		SW,MICROESE11SH2CXQ
SW2	87-A90-248-010		SW,MICROESE11SH2CXQ
SW3	87-A90-248-010		SW,MICROESE11SH2CXQ
SW4	87-036-110-010		SW,MICRO SPPB62
SW5	87-036-110-010		SW,MICRO SPPB62
SW6	87-036-110-010		SW,MICRO SPPB62
SW8	87-A90-248-010		SW,MICRO ESE11SH2CXQ
SW9	87-036-110-010		SW,MICRO SPPB62
W1	82-ZM3-601-010		RBN,CORD 4P-75

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding

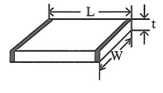
88 − □□□ □□□

A
抵抗部品コード
Resistor Code

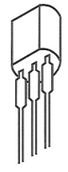
桁表示
Figure

抵抗値
Value of resistor

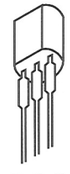
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形／Form	L	W	t	
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

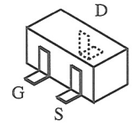
TRANSISTOR ILLUSTRATION (FX-NH1100)



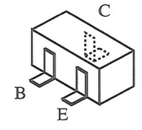
2SC1815
2SC3266
CSC2001K
KTC3198GR



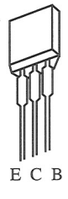
2SA1296



2SK2158

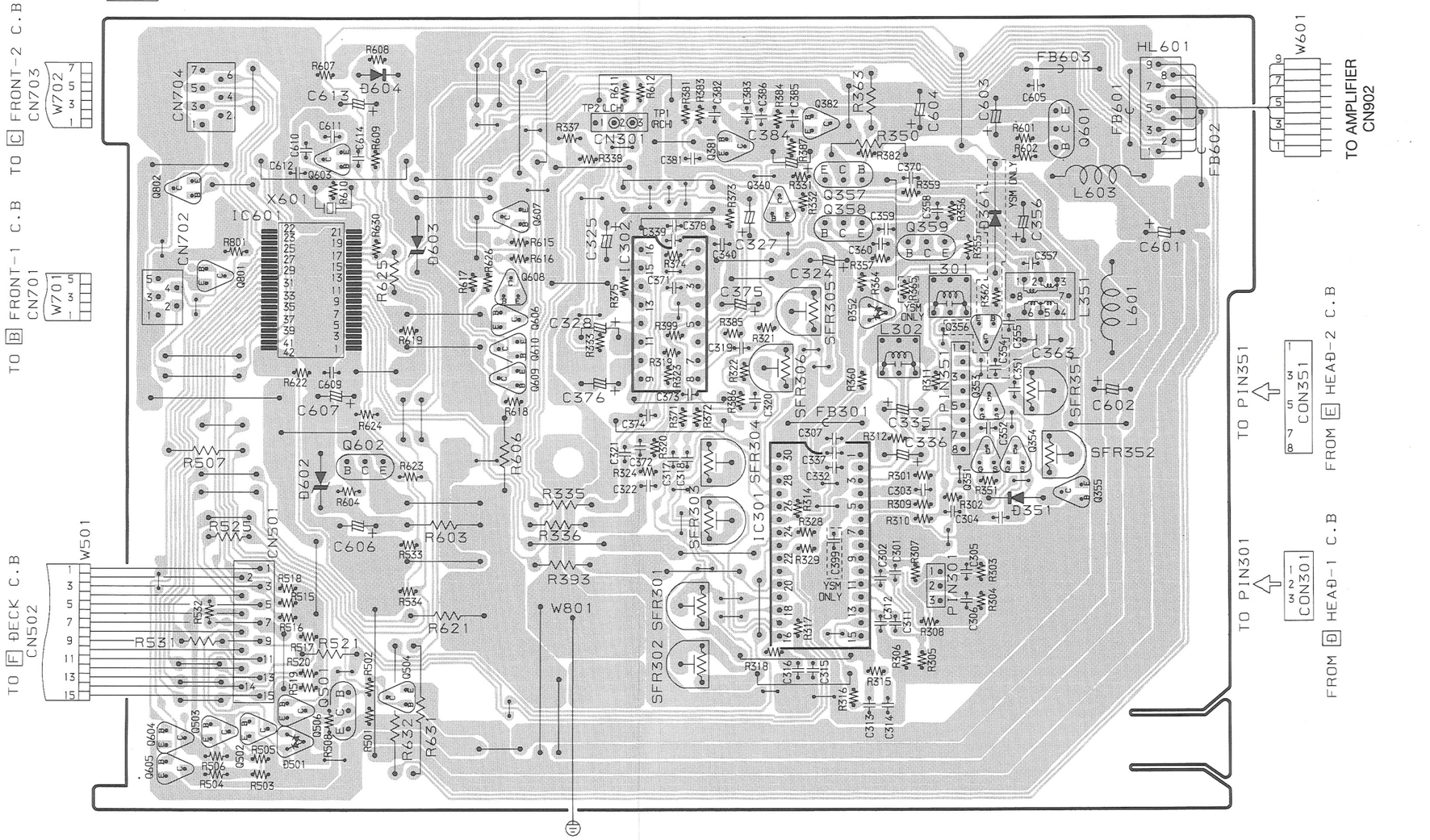


2SC3052
CSA1362
RN1410
RT1N141C
RT1N144C
RT1P141C

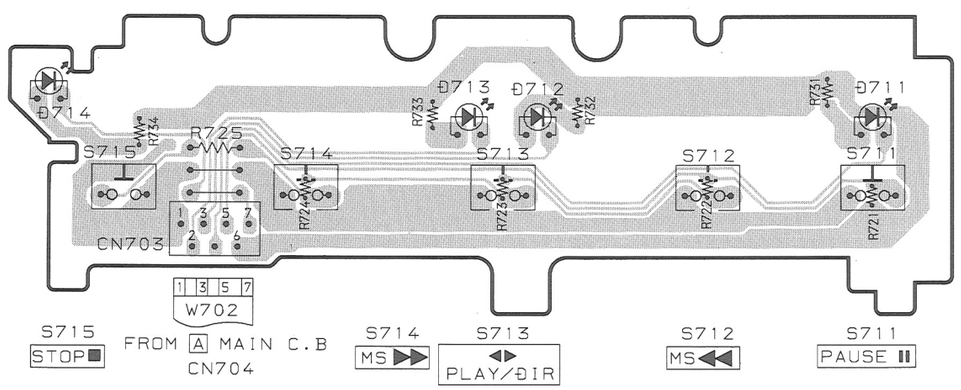


2SA933SRS

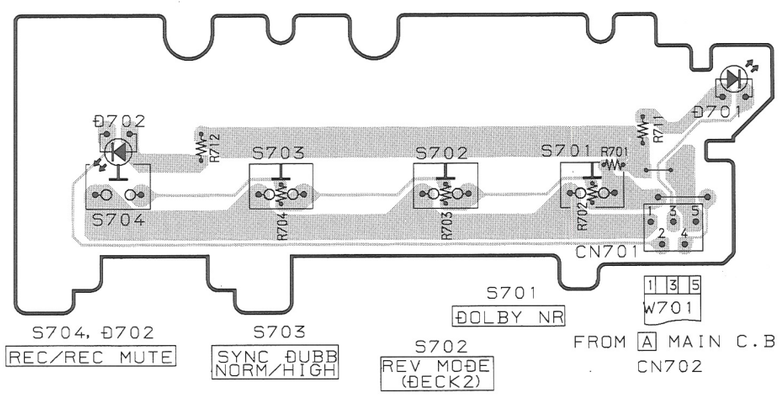
A MAIN C.B



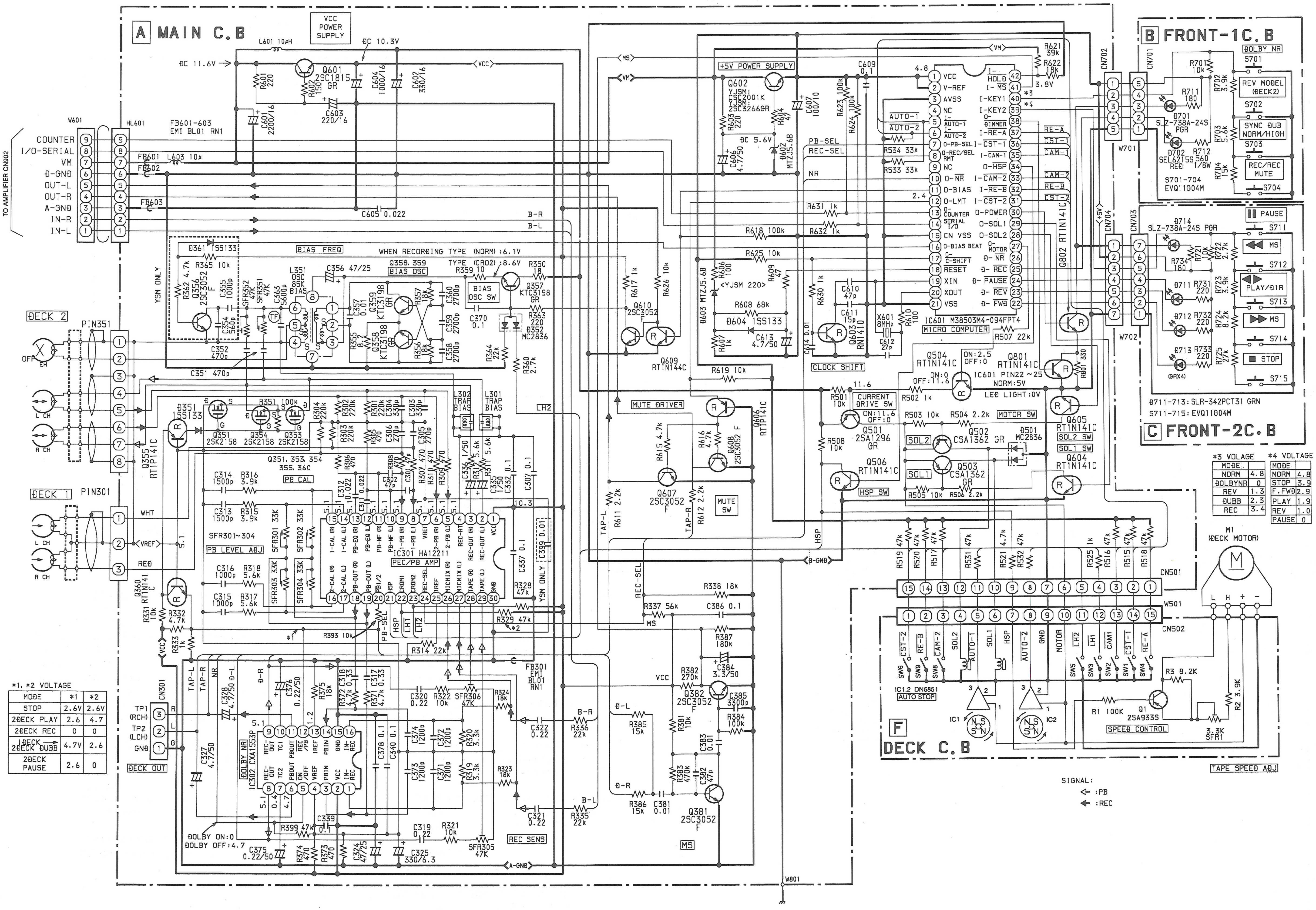
C FRONT-2 C.B



B FRONT-1 C.B



SCHEMATIC DIAGRAM (MAIN / FRONT / DECK : FX-NH1100)



*1, *2 VOLTAGE

MODE	*1	*2
STOP	2.6V	2.6V
2DECK PLAY	2.6	4.7
2DECK REC	0	0
1DECK → 2DECK DUBB	4.7V	2.6
2DECK PAUSE	2.6	0

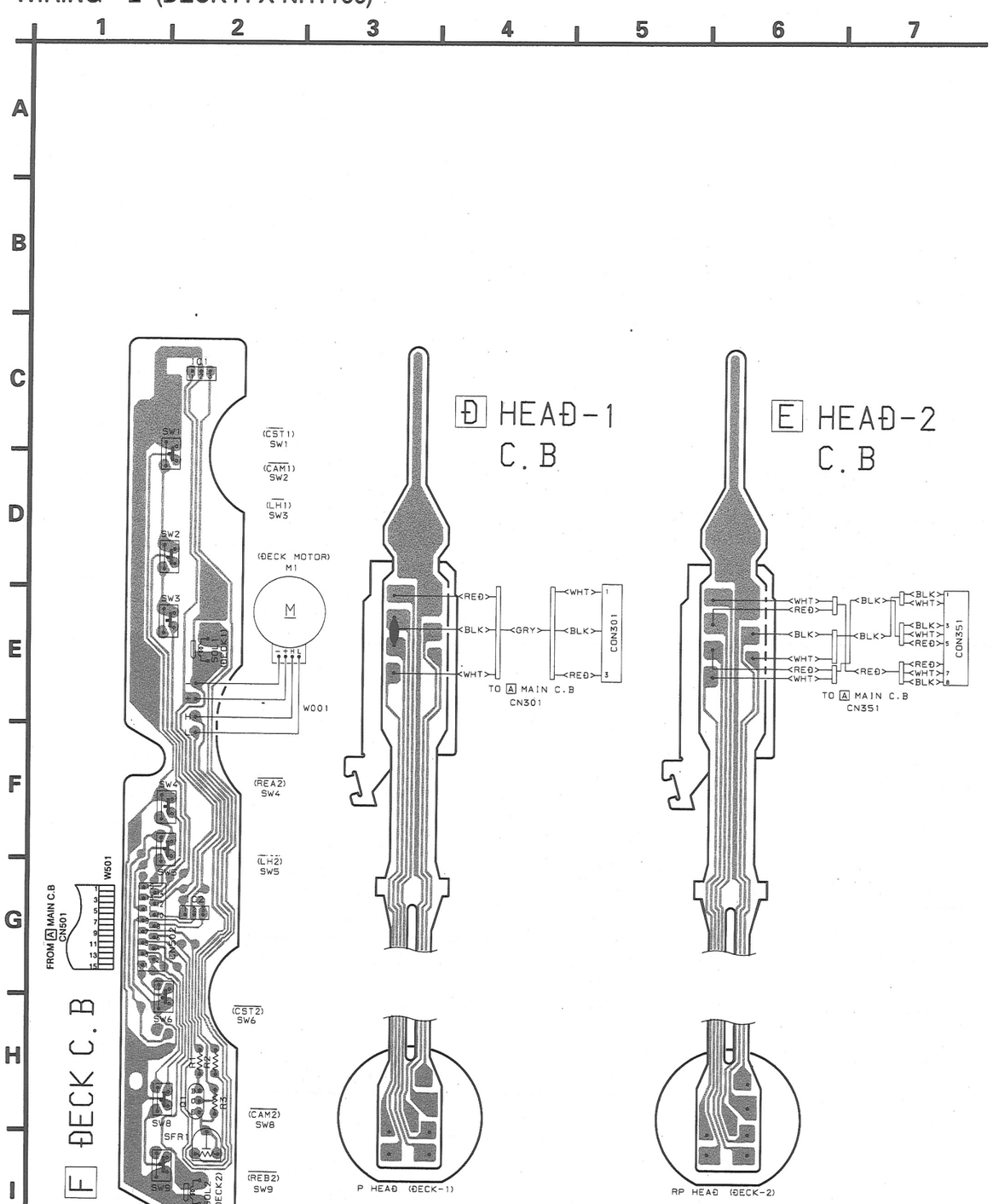
*3 VOLAGE

MODE	
NORM	4.8
DOLBYNR	0
REV	1.3
DUBB	2.3
REC	3.4

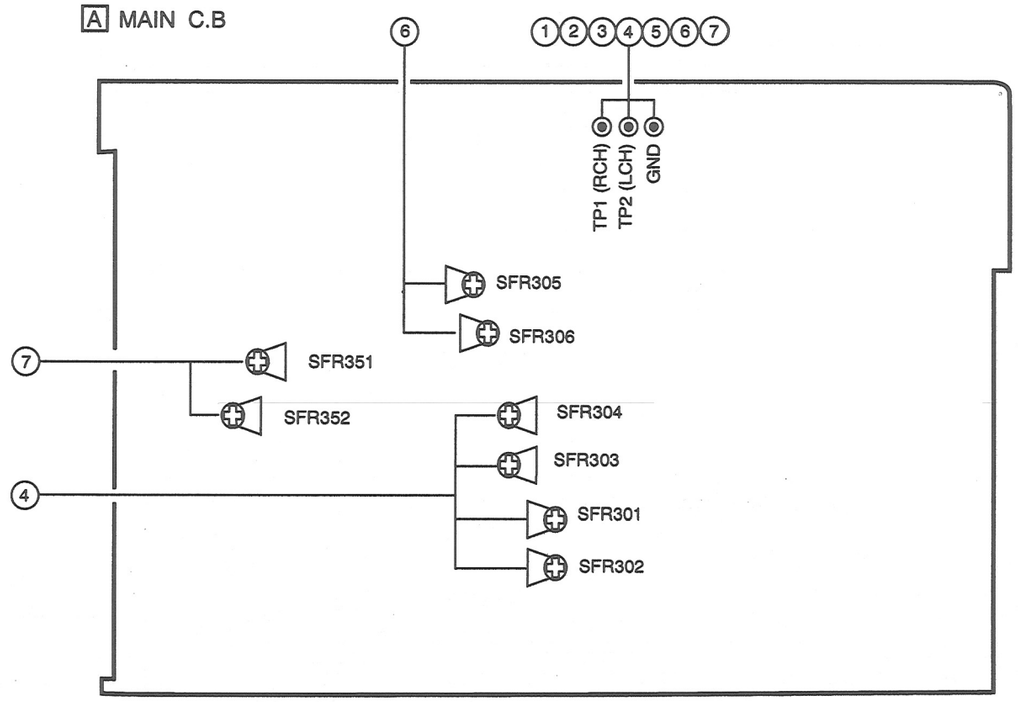
*4 VOLTAGE

MODE	
NORM	4.8
STOP	3.9
F.FWD	2.9
PLAY	1.9
REV	1.0
PAUSE	0

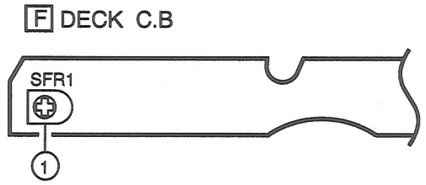
WIRING – 2 (DECK : FX-NH1100)



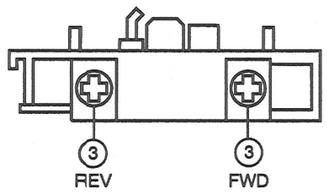
ADJUSTMENT <DECK> (FX-NH1100)



F DECK C.B



DECK–1 P,DECK-2R/P/E HEAD HEAD



< DECK SECTION >

1. Tape Normal Speed Adjustment (DECK1, DECK2)
   Settings : • Test tape : TTA–100 (Tape center)
   • Test point : TP1 (Rch), TP2 (Lch)
   • Adjustment location : SFR1
   Method : Play back the test tape and adjust SFR1 so that the test point becomes 3000Hz ± 5Hz(FWD) Then check REV speed is 3000Hz ± 45Hz.

2. High Speed Check (DECK1, DECK2)
   Settings : • Test tape : TTA–100 (Tape center)
   • Test point : TP1 (Rch), TP2 (Lch)
   Method : After normal speed adjustment, play back (High speed) the test tape. Then check tape speed is 6000Hz ±400Hz (FWD).

3. Head Azimuth Adjustment (DECK1, DECK2)
   Settings : • Test tape : TTA–300
   • Test point : TP1(Rch), TP2 (Lch)
   • Adjustment location : Head azimuth adjustment screw
   Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

4 PB Sensitivity Adjustment (DECK1, DECK2)
   Settings : • Test tape : TTA–200
   • Test point : TP1 (Rch), TP2 (Lch)
   • Adjustment location : SFR301 (DECK1, Lch)
   SFR302 (DECK1, Rch)
   SFR303 (DECK2, Lch)
   SFR304 (DECK2, Rch)
   Method : Play back the test tape and adjust SFRs so that the output level of the test point becomes 245mV (DECK2), 260mV (DECK1).

5. PB Frequency Response Check (DECK1, DECK2)
   Settings : • Test tape : TTA–300
   • Test point : TP1 (Rch), TP2 (Lch)
   Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is 0dB .
   Next, check that the Lch and Rch difference level of 10kHz signal is less than 2dB.

6. REC/PB Sensitivity Adjustment (DECK2)

Settings :
- Test tape : TTA–602
- Test point : TP1 (Rch), TP2 (Lch)
- Input signal : 1kHz (LINE IN)
- Adjustment location : SFR305 (Lch)
  SFR306 (Rch)

Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP1, TP2 becomes 0dB (17mV). Record and play back the 1kHz signals and adjust SFRs so that the output is 0dB ± 0.5dB.

7. REC/PB Frequency Response Adjustment (DECK2)

Settings :
- Test tape : TTA–602
- Test point : TP2 (Lch), TP1 (Rch)
- Input signal : 1kHz / 10kHz (LINE IN)
- Adjustment location : SFR351 (Lch)
  SFR352 (Rch)

Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP1, TP2 becomes 0dB (17mV). Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output level of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.21% (W.R.M.S DECK 1, 2)
Pinch roller pressure :	270 ~ 330g (FWD, REV)
Take-up torque :	30 ~ 55g-cm (FWD, REV)
F.F & REW torque :	75 ~ 160g-cm (FWD)
	75 ~ 160g-cm (REW)
Back tension :	3 ± 4g-cm (DECK 1, 2)
PB Output level :	245mV ± 1dB (DECK 1)
	230mV ± 1dB (DECK 2)
REC/PB Output level :	165mV ± 2dB (NORMAL, CrO2)
Distortion (REC/PB) :	Less than 2.0% (NORMAL, CrO2)
Noise level (PB) :	Less than 1.8mV (NORMAL, ALL FUNCTION OFF)
Noise level (REC/PB) :	Less than 2.0mV (NORMAL, ALL FUNCTION OFF)
Erasing ratio :	More than 60dB (at 125Hz, 10VU)
Test tape :	NORMAL : TTA–602
	CrO2 : TTA–615

IC DESCRIPTION (FX-NH1100)

IC, M38503M4-094FP T4

Pin No.	Pin Name	I/O	Description
1	VCC	–	IC power supply.
2	V-REF	–	Connected to VCC.
3	AVSS	–	Connected to GND.
4	NC	–	Not connected.
5	I-$\overline{\text{AUTO1}}$	I	Input of DECK 1 reel platform pulse.
6	I-$\overline{\text{AUTO2}}$	I	Input of DECK 2 reel platform pulse.
7	O-PB-SEL	O	Three-state output. *2
8	O-REC-SEL	O	
9	NC	–	Not connected.
10	O-$\overline{\text{NR}}$	O	When NR is ON: "L".
11	O-BIAS	O	BIAS control.
12	O-LMT	O	Output LINE MUTE. When MUTE: "H".
13	O-COUNTER	O	Output tape counter data.
14	SERIAL I/O	I/O	Serial I/O terminal.
15	CN VSS	–	Connected to GND.
16	O-B BEAT	O	For bias beat changeover. When in operation: "H". Initial: "L".
17	$\overline{\text{O-C SHIFT}}$	O	While clock shift: "L" **
18	$\overline{\text{RESET}}$	I	RESET signal input pin.
19	XIN	I	Crystal oscillation pin.
20	XOUT	O	Crystal oscillation pin.
21	VSS	–	Connected to GND.
22	D-$\overline{\text{FWD}}$	O	When Power is ON: "L" under STOP status. When FWD operates: flashing ("L" ↔ "H" repeated). While FF: fast flashing.
23	D-$\overline{\text{RVS}}$	O	When Power is ON: "L" under STOP status. When RVS operates: flashing ("L" ↔ "H" repeated). While REW: fast flashing.
24	D-$\overline{\text{PAUSE}}$	O	When Power is ON: "L" under STOP status. While PAUSE: flashing ("L" ↔ "H" repeated).
25	D-$\overline{\text{REC}}$	O	While REC, DUBBING: "L". While REC, MUTE: flashing.
26	D-$\overline{\text{NR}}$	O	When NR is ON: "L". (Not connected)
27	O-MOTOR	O	When MOTOR is in operation or power on (500msec): "H".
28	O-SOL2	O	When DECK 2 solenoid is in operation: "H".
29	O-SOL1	O	When DECK 1 solenoid is in operation: "H".
30	O-POWER	O	When POWER of MX-NM1000 / NH1000 is ON: "H" **
31	I-$\overline{\text{CST-2}}$	I	DECK 2 cassette detection. When cassette exists: "L".
32	I-$\overline{\text{RE-B}}$	I	DECK 2 side B REC enable. When recordable: "L".
33	I-$\overline{\text{CAM-2}}$	I	DECK 2 cam. When switch is ON: "L".
34	O-HSP	O	Output high speed signal. High speed: "L".
35	I-$\overline{\text{CAM-1}}$	I	DECK 1 mechanism cam. When switch is ON: "L".
36	I-$\overline{\text{CST-1}}$	I	DECK 1 cassette detection. When cassette exists:"L".
37	I-$\overline{\text{RE-A}}$	I	DECK 2 side A REC enable. When recordable: "L"

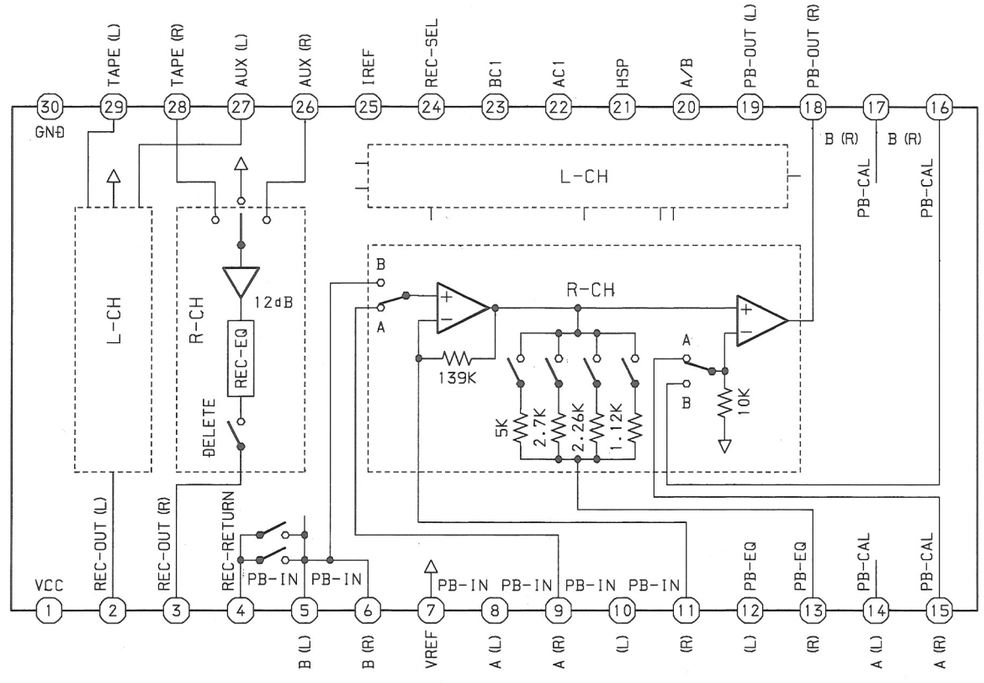
	O-REC-SEL	O-PB-SEL
L	TAPE	DECK 2 REC
H	REC IN	DECK 2 PB
H1-Z	REC MUTE	DECK 1 PB

Pin No.	Pin Name	I/O	Description
38	O-$\overline{\text{DIMMER}}$	O	Ordinarily "H". When MX-NH1100 is in DIMMER 1 or 2 mode: "L".
39	I-KEY2	I	KEY input 2. AD input.
40	I-KEY1	I	KEY input 1. AD input.
41	I-$\overline{\text{MS}}$	I	MS input. AD input.
42	I-$\overline{\text{HOLD}}$	I	System power supply monitor. AD input.

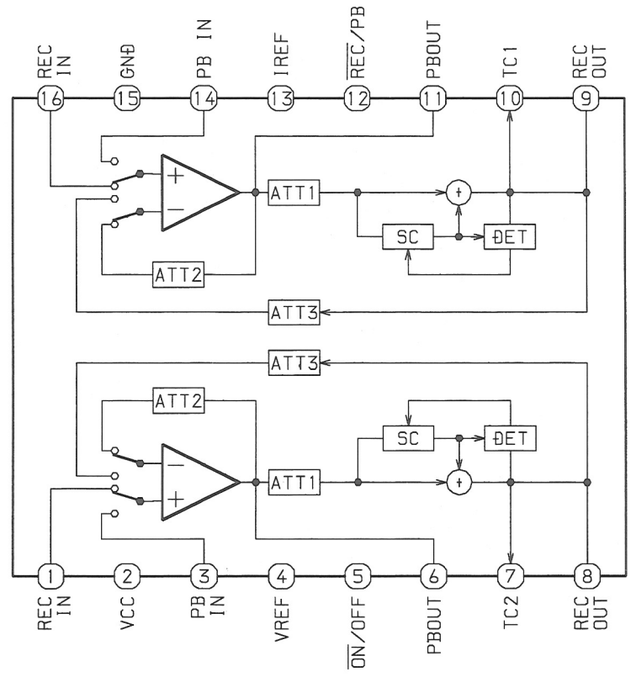
*P1Ns 22, 23, 24, 25, and 26 should be "H" when MX-NH1100 is in DIMMER 2 mode.

IC BLOCK DIAGRAM (FX-NH1100)

IC, HA12211

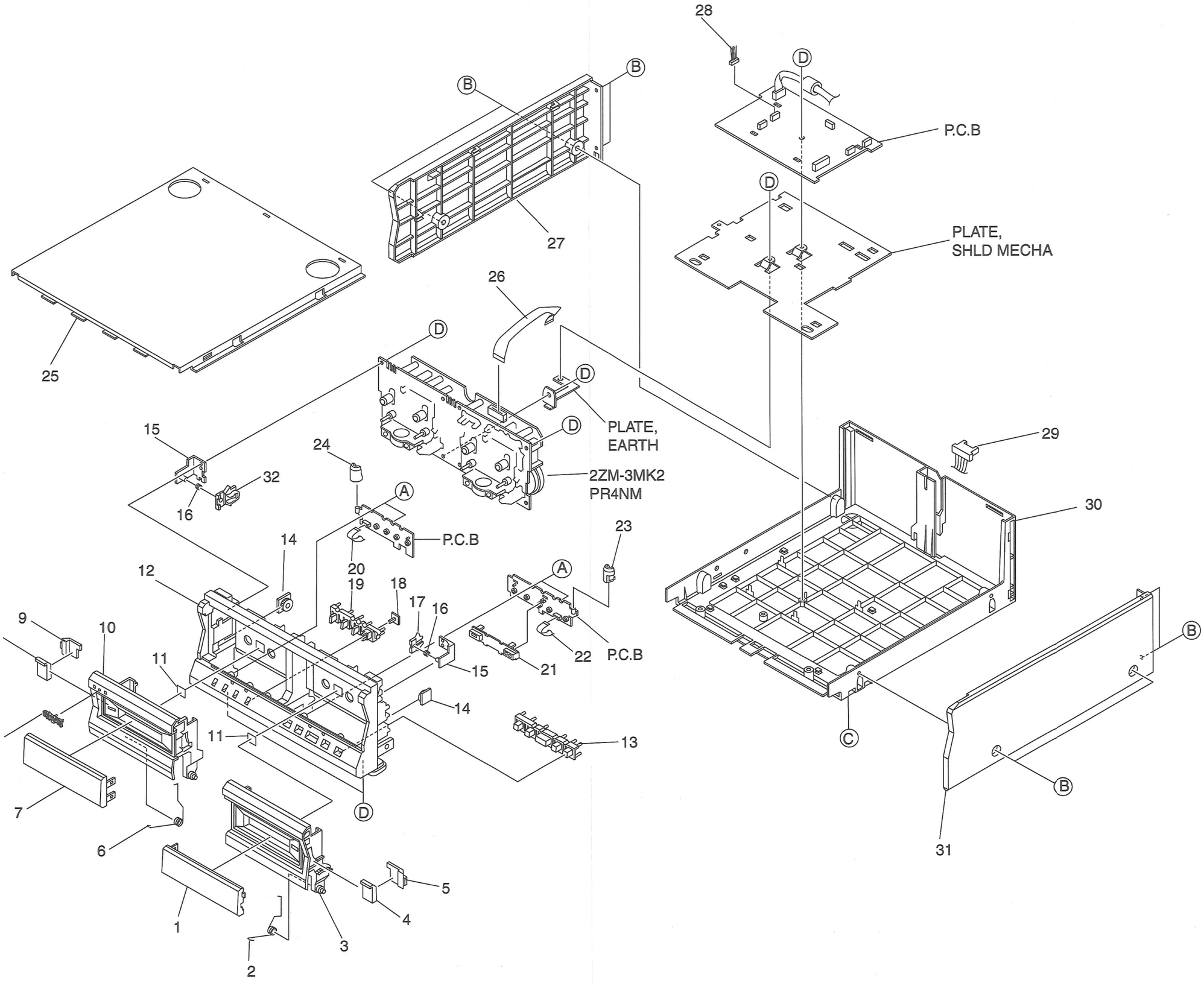


IC, CXA1553P



ATT:Attenuator
SC:Side Chain
DET:Detector

MECHANICAL EXPLODED VIEW 1 / 1 (FX-NH1100)



MECHANICAL PARTS LIST 1 / 1 (FX-NH1100)

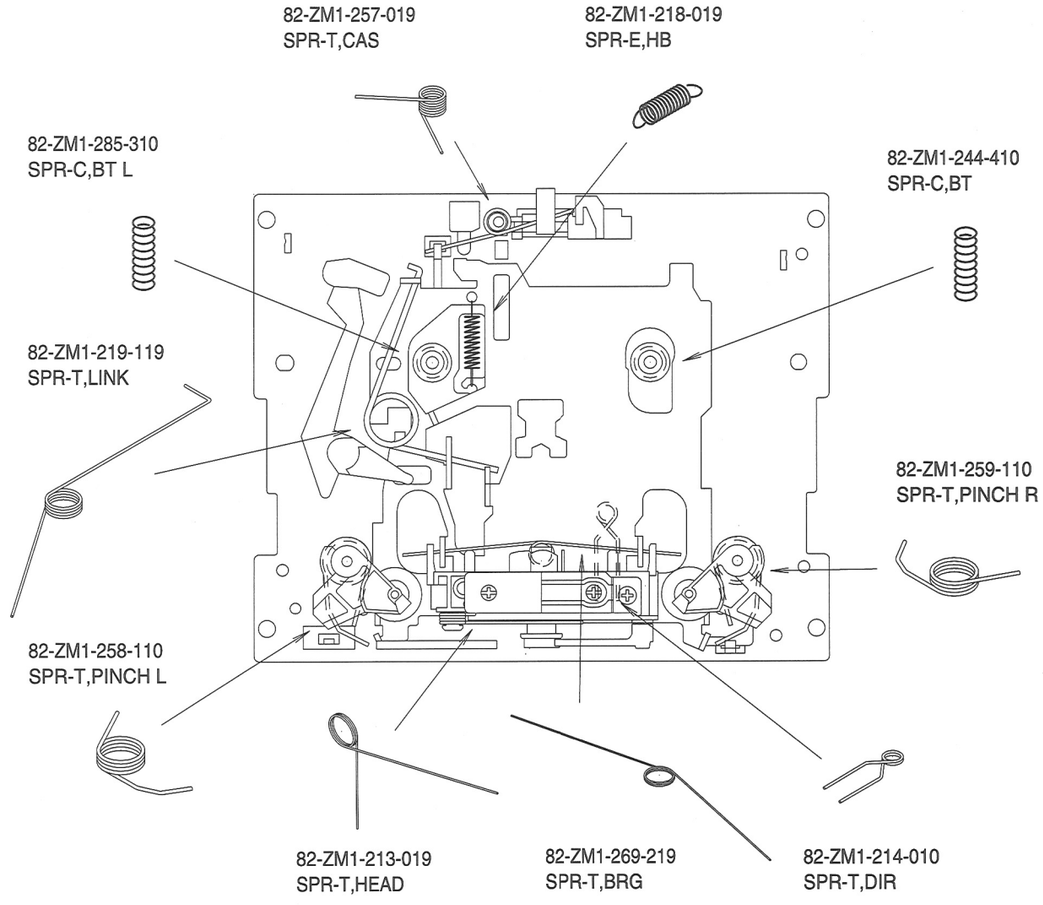
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

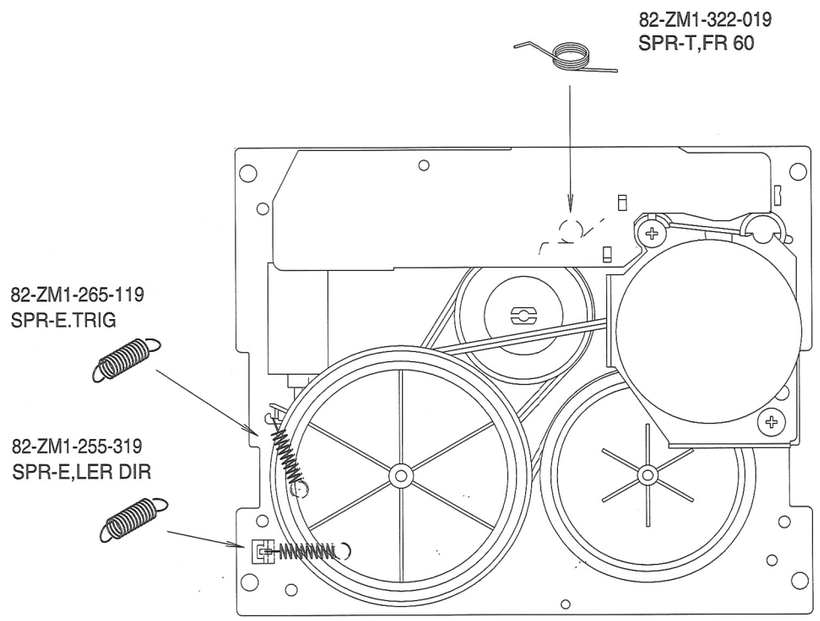
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-SW1-005-010		WINDOW,CASS 2
2	82-NF5-219-010		SPR-T,EJECT 2 (SIN)
3	8Z-SW1-003-010		BOX,CASS 2
4	8Z-SW1-013-010		REFLECTOR,CASS 1
5	8Z-SW1-202-010		COVER, REFLECTOR 2
6	82-NF5-218-010		SPR-T,EJECT 1 (SIN)
7	8Z-SW1-004-010		WINDOW,CASS 1
8	87-B00-002-010		BADGE,AIWA 30 ABS SIL
9	8Z-SW1-201-010		COVER, REFLECTOR 1
10	8Z-SW1-002-010		BOX,CASS 1
11	81-532-080-010		LABEL, CASS. COMPT
12	8Z-SW1-001-010		CABI,FR
13	8Z-SW1-012-010		KEY,ASSY OPE
14	87-NF8-220-010		DMPR,150
15	82-NF5-229-010		PLATE,LOCK
16	86-NF9-224-010		SPR-C,LOCK
17	87-NF4-217-110		HLDR,LOCK 2
18	8Z-SW1-204-010		GUIDE,LED
19	8Z-SW1-011-010		KEY,ASSY REC
20	88-905-331-110		FF-CABLE, 5P 1.25 330MM
21	8Z-SW1-203-010		GUIDE,LED OPE
22	88-907-301-110		FF-CABLE, 7P 1.25
23	8Z-SW1-206-010		GUIDE,LED CASS 2
24	8Z-SW1-205-010		GUIDE,LED CASS 1
25	8Z-SW1-015-010		CABI,STEEL
26	88-915-161-110		FF-CABLE, 15P 1.25
27	8Z-SW1-016-010		PANEL,SIDE L
28	86-NF5-618-110		CONN ASSY,8P RPB
29	88-SW1-607-010		CORD,FG9P
30	8Z-SW1-020-010		CABI,REAR YJSM<YJ>
30	8Z-SW1-022-010		CABI,REAR YSM<Y>
31	8Z-SW1-017-010		PANEL,SIDE R
32	87-NF4-216-010		HLDR,LOCK 1
A	87-067-579-010		TAPPING SCREW, BVT2+3-8
B	87-B10-091-010		UTT2+3-10 W/O BLK
C	87-067-633-010		TAPPING SCREW, BVT2+3-8
D	87-067-703-010		TAPPING SCREW, BVT2+3-10

COLOR NAME TABLE

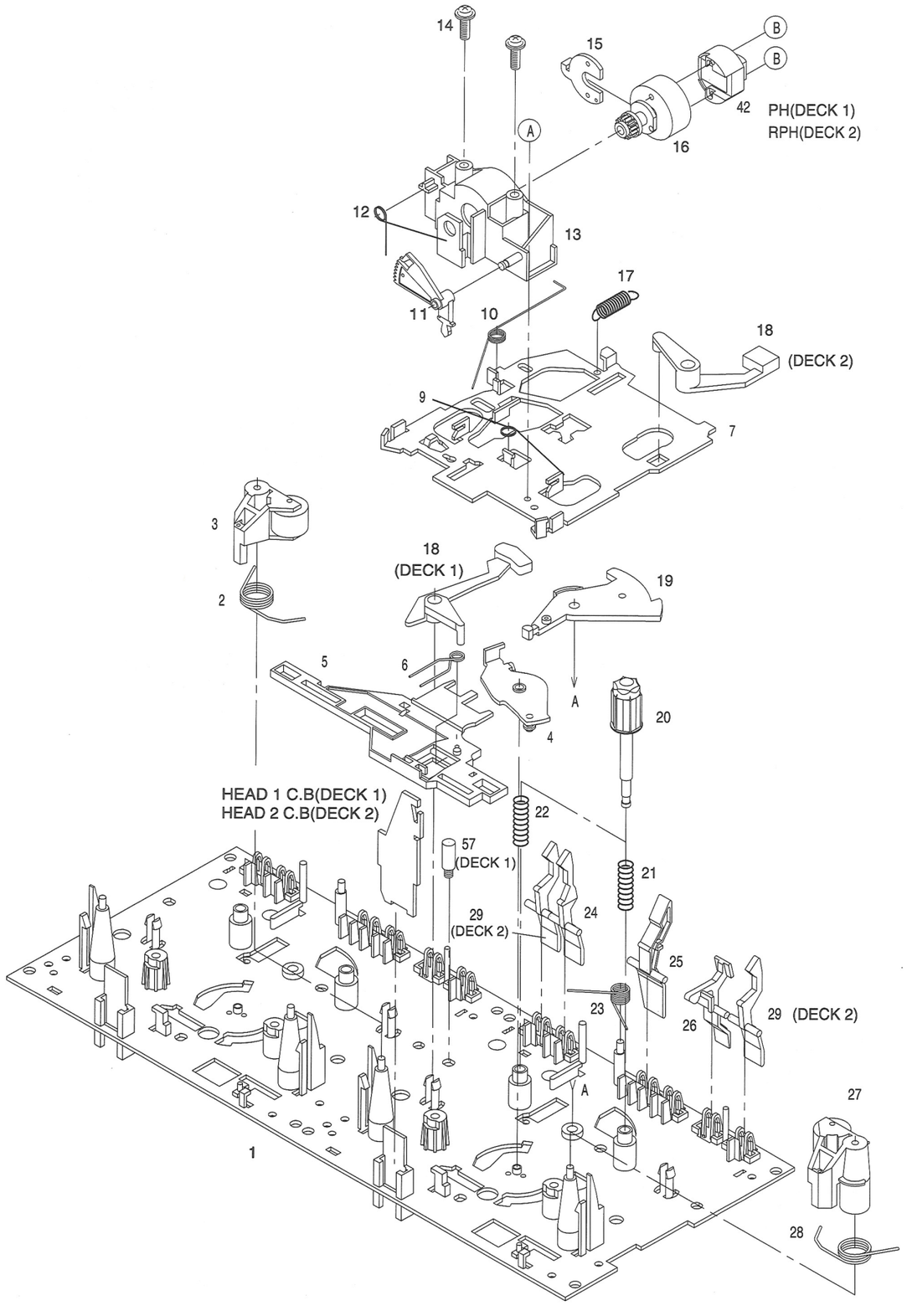
Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

SPRING APPLICATION POSITION (FX-NH1100)

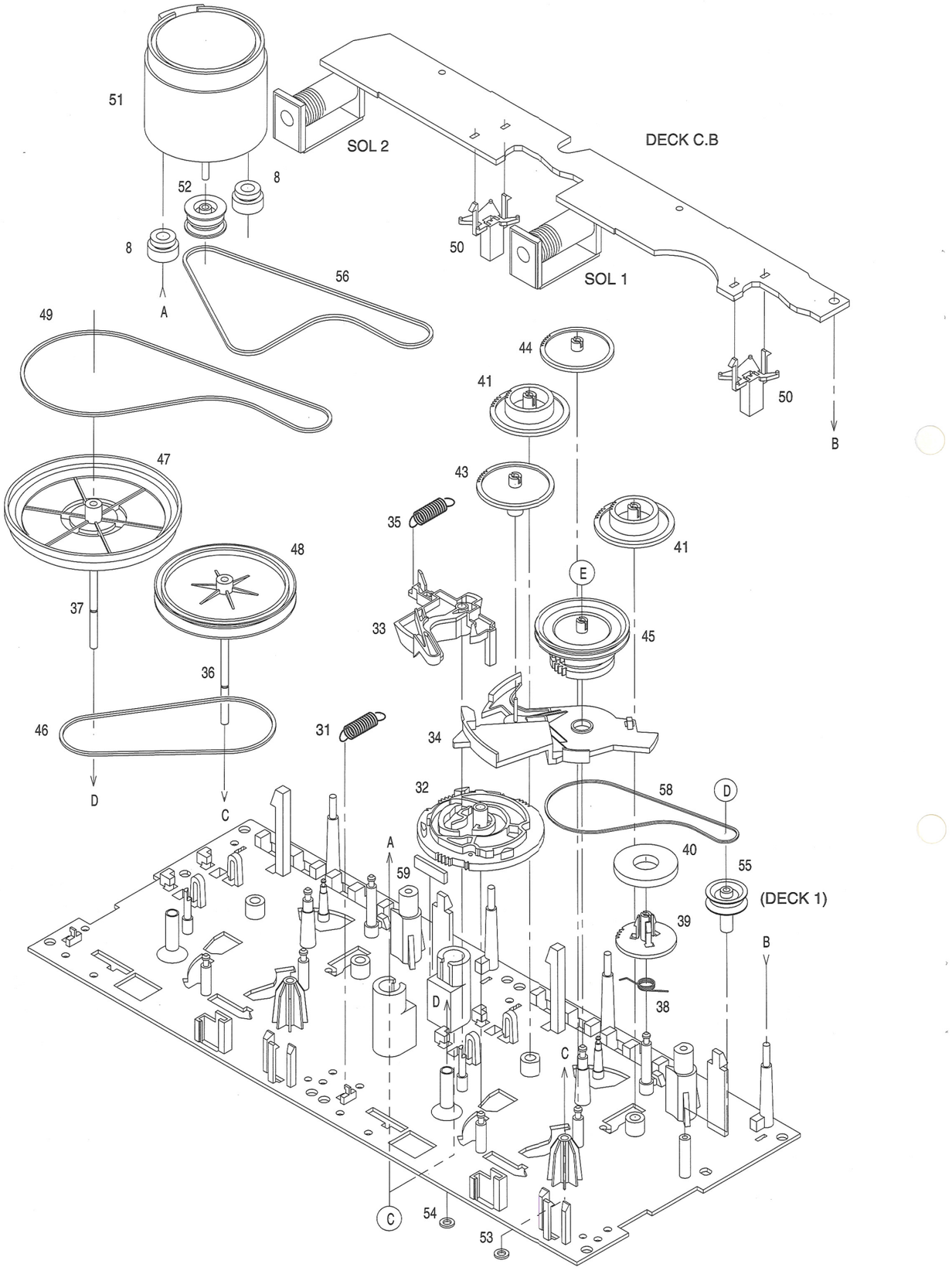




TAPE MECHANISM EXPLODED VIEW 1 / 2 (FX-NH1100)



TAPE MECHANISM EXPLODED VIEW 2 / 2 (FX-NH1100)



TAPE MECHANISM PARTS LIST 1 / 1 (FX-NH1100)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM3-301-519		CHAS ASSY,M2
2	82-ZM1-258-110		SPR-T,PINCH L
3	82-ZM1-341-110		LVR ASSY,PINCH L2
4	82-ZM1-333-010		PLATE,LINK 2
5	82-ZM1-266-11K		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-81K		CHAS,HEAD
8	82-ZM3-307-019		CUSH-G,DIA3.7-8-3.2
9	82-ZM1-269-219		SPR-T,BRG
10	82-ZM1-219-119		SPR-T,LINK
11	82-ZM1-210-119		GEAR,H T
12	82-ZM1-213-019		SPR-T,HEAD
13	82-ZM1-207-619		GUIDE,TAPE
14	86-ZM4-206-010		S-SCREW,AZIMUTH
15	82-ZM1-314-119		PLATE,HEAD
16	82-ZM1-208-119		HLDR,HEAD
17	82-ZM1-218-019		SPR-E,HB
18	82-ZM1-263-110		LVR,EJECT L (DECK 1)
18	82-ZM1-264-010		LVR,EJECT R (DECK 2)
19	82-ZM1-222-21K		LVR,PLAY
20	82-ZM1-217-319		REEL TABLE
21	82-ZM1-244-510		SPR-C,BT
22	82-ZM1-285-310		SPR-C,BT L
23	82-ZM1-257-019		SPR-T,CAS
24	82-ZM1-241-319		LVR,MC
25	82-ZM1-242-019		LVR,CAS
26	82-ZM1-243-019		LVR,STOP
27	82-ZM1-344-110		LVR ASSY,PINCH R2
28	82-ZM1-259-110		SPR-T,PINCH R
29	82-ZM1-240-11K		LVR,REC (DECK 2)
31	82-ZM1-255-319		SPR-E,LVR DIR
32	82-ZM3-305-01K		GEAR,CAM M2
33	82-ZM1-227-21K		LVR,TRIG
34	82-ZM3-306-11K		LVR,FR M2
35	82-ZM1-265-119		SPR-E,TRIG
36	82-ZM1-236-019		CAPSTAN N 2-41.5
37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
38	82-ZM1-322-019		SPR-T,FR60
39	82-ZM1-220-219		GEAR,IDLER
40	82-ZM3-616-019		RING MAGNET 4
41	82-ZM1-216-31K		GEAR,REEL
42	87-A90-319-010		HEAD,PH HADKH2 FPC
42	87-A90-320-010		HEAD,RPH HADKH5 FPC
43	82-ZM1-225-21K		GEAR,FR
44	82-ZM1-226-019		GEAR,REW
45	82-ZM3-333-310		SLIP DISK ASSY 2
46	82-ZM1-338-010		BELT FR4
47	82-ZM1-349-110		FLY-WHL,R W(DECK 2)
47	82-ZM3-338-110		FLY-WHL,R3 W(DECK 1)
48	82-ZM1-348-010		FLY-WHL,L W(DECK 2)
48	82-ZM1-348-010		FLY-WHL,L W(DECK 1)
49	82-ZM3-329-210		BELT,SBU R2
50	82-ZM1-245-210		HLDR,IC
51	87-045-347-019		MOT,SHU2L 70(M1)
52	82-ZM3-221-010		PULLEY,MOT 2M
53	82-ZM1-288-019		SH,1.63-3.2-0.5 SLT
54	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
55	82-ZM3-335-210		PULLEY,COUPLER M3(DECK 1)
56	82-ZM3-337-010		BELT,SBU MOT 2
57	82-ZM3-339-010		SHAFT,COUPLER N3(DECK 1)
58	86-ZM1-206-010		BELT,MAIN L
59	82-ZM3-340-010		SH,BELT D2
A	85-ZM3-202-010		S-SCREW,TG
B	80-ZM6-207-019		V+1.6-7
C	82-ZM3-318-019		S-SCRW MOTOR M2
D	87-B10-043-010		W-P,0.99-4-0.25 SLT
E	82-ZM3-334-010		PW,2.16-6-0.4

MODEL NO.

GE-NH1100/NAVH1200

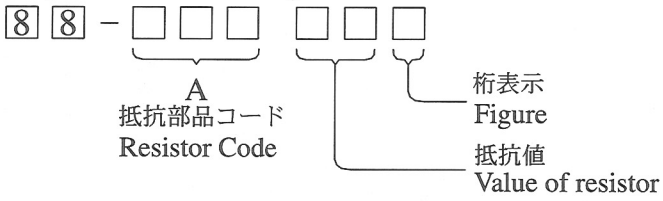
ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

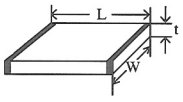
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8Z-SU1-603-010		IC,LC866448W-5L20
	87-A21-023-040		C-IC,BA3835F
TRANSISTOR			
	87-026-263-080		C-TR,RN1410
DIODE			
	87-070-136-080		ZENER,MTZJ5.1B
	87-017-931-080		ZENER,MTZJ5.6B
	87-020-465-080		DIODE,1SS133 (110MA)
MAIN C.B			
C101	87-010-550-040		CAP,E 100-6.3 GAS
C103	87-010-497-040		CAP,E 4.7-35 GAS
C105	87-010-312-080		C-CAP,S 15P-50 CH
C106	87-010-320-080		CHIP CAP 68P
C107	87-010-316-080		C-CAP,S 33P-50 CH
C108	87-010-196-080		CHIP CAPACITOR,0.1-25
C109	87-010-196-080		CHIP CAPACITOR,0.1-25
C110	87-012-368-080		C-CAP,S 0.1-50 F
C111	87-010-552-040		CAP,E 22-16 GAS
C201	87-012-140-080		CAP 470P
C202	87-012-369-080		C-CAP,S 0.047-50F
C203	87-010-404-040		CAP,E 4.7-50 SME
C204	87-010-405-040		CAP,E 10-50
C205	87-010-405-040		CAP,E 10-50
C206	87-010-405-040		CAP,E 10-50
C301	87-010-196-080		CHIP CAPACITOR,0.1-25
C302	87-010-196-080		CHIP CAPACITOR,0.1-25
C303	87-010-197-080		CAP, CHIP 0.01 DM
C304	87-010-182-080		C-CAP,S 2200P-50 B
C401	87-010-196-080		CHIP CAPACITOR,0.1-25
C402	87-010-196-080		CHIP CAPACITOR,0.1-25
C403	87-010-993-080		CHIP CAPACITOR,0.056-25
C404	87-010-993-080		CHIP CAPACITOR,0.056-25
C405	87-012-358-080		C-CAP,S 0.47-10 F Z
C406	87-010-196-080		CHIP CAPACITOR,0.1-25
C407	87-012-158-080		C-CAP,S 390P-50 CH
FL201	8Z-SU1-605-010		FL,BJ699GK
L101	87-005-152-080		COIL,10UH
L102	87-005-130-080		COIL,10UH
L103	87-005-130-080		COIL,10UH
L104	87-005-152-080		COIL,10UH
L301	87-003-097-080		COIL,1UH
LED201	87-A40-380-080		LED,SEL6510C-TP5 GRN
LED202	87-A40-380-080		LED,SEL6510C-TP5 GRN
LED203	87-A40-380-080		LED,SEL6510C-TP5 GRN
LED204	87-A40-380-080		LED,SEL6510C-TP5 GRN
LED205	87-A40-380-080		LED,SEL6510C-TP5 GRN
LED206	87-A40-380-080		LED,SEL6510C-TP5 GRN
LED207	87-A40-380-080		LED,SEL6510C-TP5 GRN
LED208	87-A40-380-080		LED,SEL6510C-TP5 GRN
LED209	87-A40-317-080		LED,SLR-342VCT31 RED<1200>
LED210	87-A40-317-080		LED,SLR-342VCT31 RED<1200>
LED211	87-A40-317-080		LED,SLR-342VCT31 RED<1200>
LED212	87-A40-317-080		LED,SLR-342VCT31 RED<1200>
LED213	87-A40-317-080		LED,SLR-342VCT31 RED<1200>
LED214	87-A40-317-080		LED,SLR-342VCT31 RED<1200>
LED215	87-A40-317-080		LED,SLR-342VCT31 RED<1200>
LED216	87-A40-317-080		LED,SLR-342VCT31 RED<1200>
S301	87-A90-095-080		SW,TACT EVQ11G04M
S302	87-A90-095-080		SW,TACT EVQ11G04M
S303	87-A90-095-080		SW,TACT EVQ11G04M
S304	87-A90-095-080		SW,TACT EVQ11G04M
S305	87-A90-095-080		SW,TACT EVQ11G04M
S306	87-A90-095-080		SW,TACT EVQ11G04M
S307	87-A90-095-080		SW,TACT EVQ11G04M
S308	87-A90-095-080		SW,TACT EVQ11G04M
S309	87-A90-095-080		SW,TACT EVQ11G04M
S310	87-A90-095-080		SW,TACT EVQ11G04M
S311	87-A90-095-080		SW,TACT EVQ11G04M
S312	87-A90-095-080		SW,TACT EVQ11G04M
S313	87-A90-095-080		SW,TACT EVQ11G04M<1200>
S314	87-A90-095-080		SW,TACT EVQ11G04M
S315	87-A90-095-080		SW,TACT EVQ11G04M
S316	87-A91-076-010		SW,RTRY REO121PVB25FINA1
W101	8Z-SU1-608-010		CORD,52305-101BLK
WH101	87-A90-882-010		HLDR,WIRE 10P 1.5 51016
X101	87-A70-070-080		VIB,CER 5.76MHZ CRHF

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

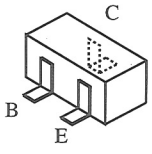
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード Resistor Code : A
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

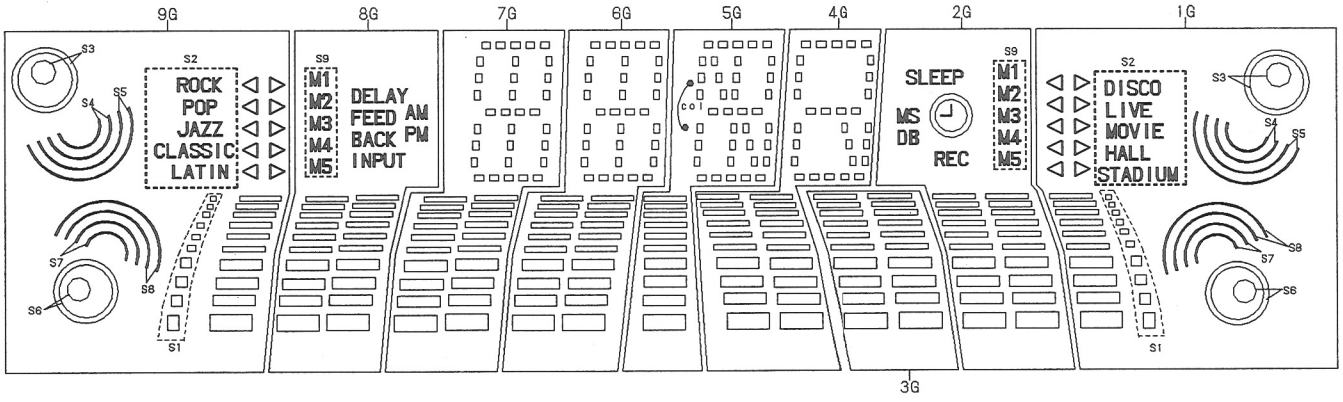
TRANSISTOR ILLUSTRATION (GE-NH1100 / NAVH1200)

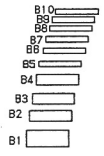


RN1410

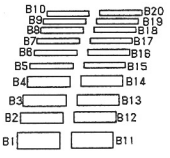
FL (BJ699GK) GRID ASSIGNMENT & ANODE CONNECTION (GE-NH1100 / NAVH1200)

GRID ASSIGNMENT

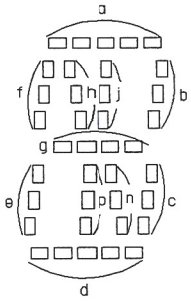




(9G、5G、1G)



(8G~6G、4G~2G)



(7G~4G)

ANODE CONNECTION

	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	▷ [M1]	—	a	a	a	a	—	—	[M1] ◁
P2	▷ [M2]	S9	b	b	b	b	—	S9	[M2] ◁
P3	▷ [M3]	DELAY	f	f	f	f	—	SLEEP	[M3] ◁
P4	▷ [M4]	FEED BACK	g	g	g	g	—	◎	[M4] ◁
P5	▷ [M5]	INPUT	c	c	c	c	—	REC	[M5] ◁
P6	[ROCK] ◁	AM	e	e	e	e	—	MS	▷ [DISCO]
P7	[POP] ◁	PM	d	d	d	d	—	DB	▷ [LIVE]
P8	S1	B11	B11	B11	h	B11	B11	B11	S1
P9	B1	B1	B1	B1	B1	B1	B1	B1	B1
P10	S6	B12	B12	n	B12	B12	B12	B12	S6
P11	B2	B2	B2	B2	B2	B2	B2	B2	B2
P12	S7	B13	B13	col(上)	B13	B13	B13	B13	S7
P13	B3	B3	B3	B3	B3	B3	B3	B3	B3
P14	S8	B14	B14	col(下)	B14	B14	B14	B14	S8
P15	B4	B4	B4	B4	B4	B4	B4	B4	B4
P16	S3	B15	B15	—	B15	B15	B15	B15	S3
P17	B5	B5	B5	B5	B5	B5	B5	B5	B5
P18	S4	B16	B16	—	B16	B16	B16	B16	S4
P19	B6	B6	B6	B6	B6	B6	B6	B6	B6
P20	S5	B17	B17	—	B17	B17	B17	B17	S5
P21	B7	B7	B7	B7	B7	B7	B7	B7	B7
P22	S2	B18	B18	—	B18	B18	B18	B18	S2
P23	B8	B8	B8	B8	B8	B8	B8	B8	B8
P24	[JAZZ] ◁	B19	B19	—	B19	B19	B19	B19	▷ [MOVIE]
P25	B9	B9	B9	B9	B9	B9	B9	B9	B9
P26	[CLASSIC] ◁	B20	B20	—	B20	B20	B20	B20	▷ [HALL]
P27	B10	B10	B10	B10	B10	B10	B10	B10	B10
P28	[LATIN] ◁	—	j, p	j, p	j, p	n	—	—	▷ [SATADIUM]

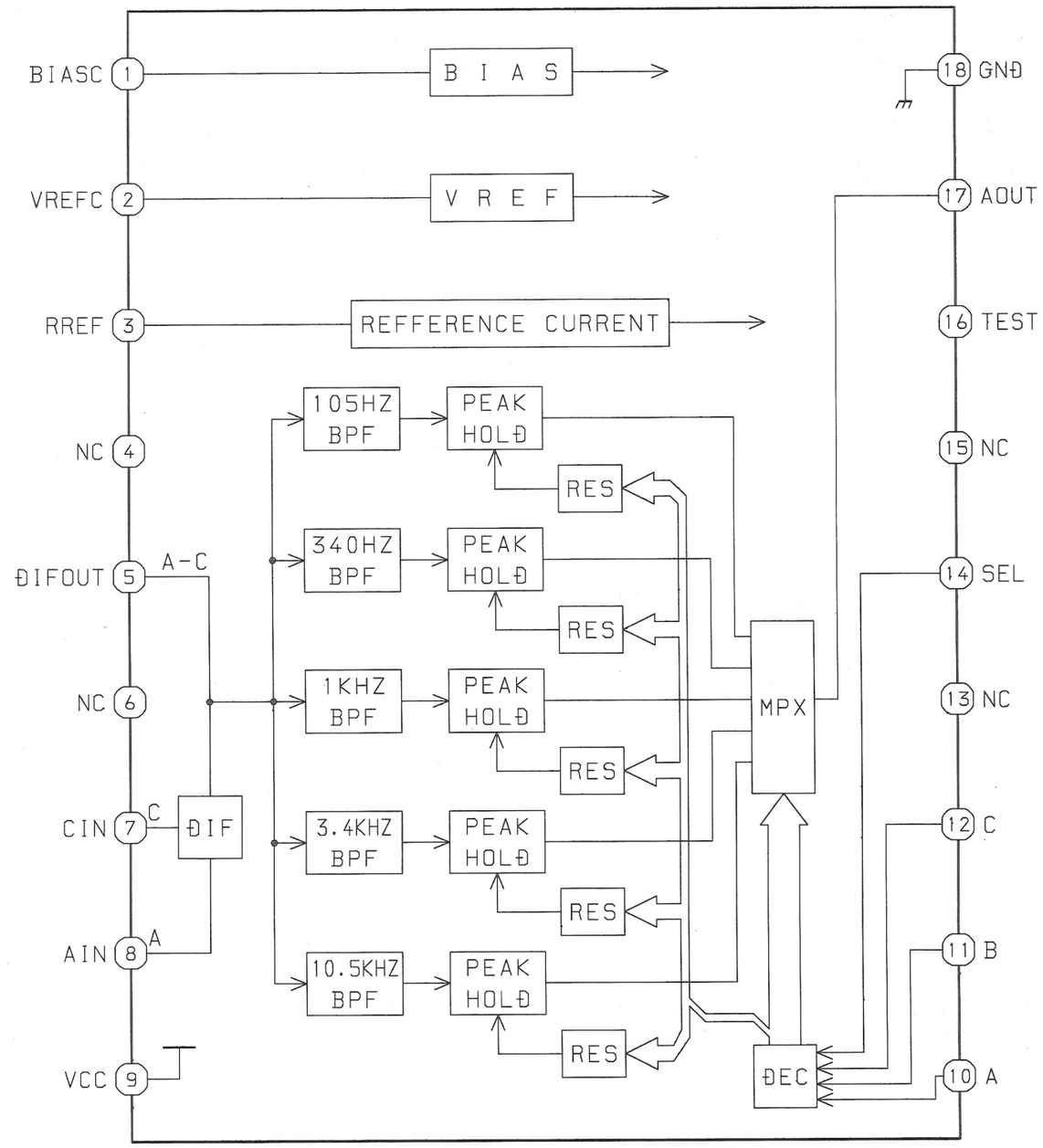
IC DESCRIPTION (GE-NH1100 / NAVH1200)

IC, LC866448W-5L20

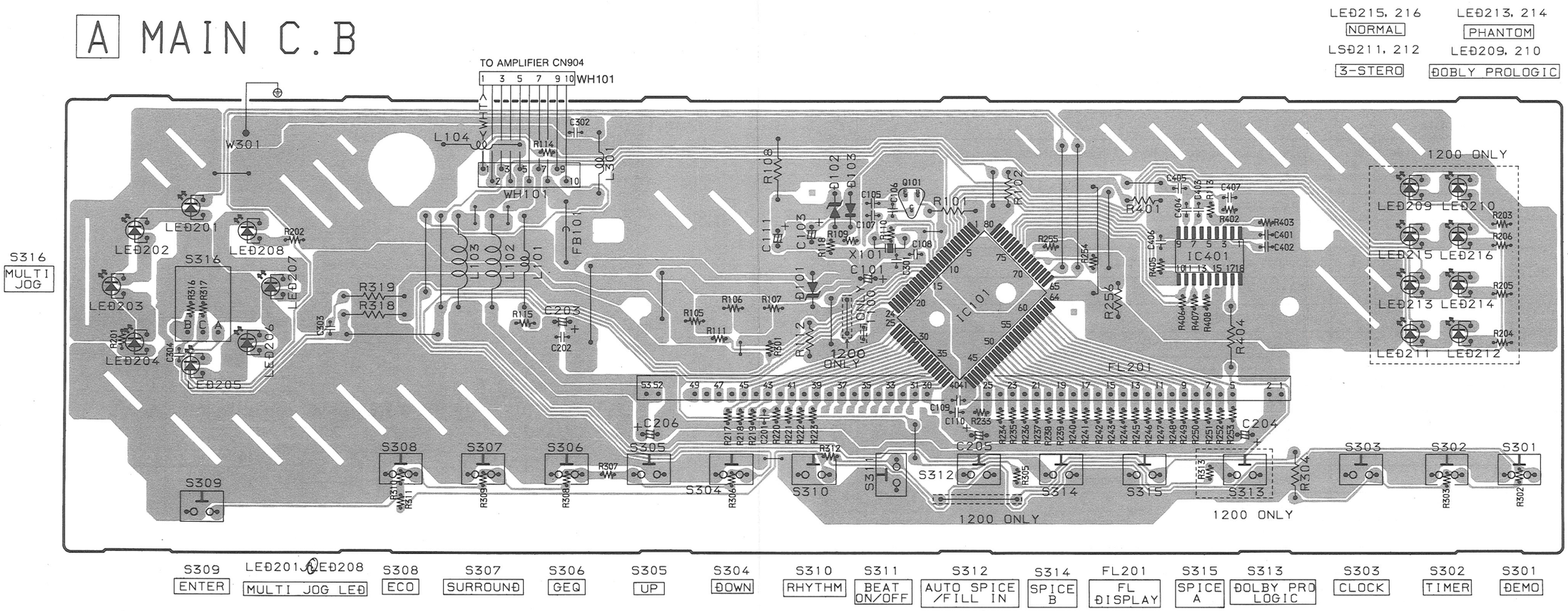
Pin No.	Pin Name	I/O	Description
1	O-C.SHIFT	O	Micro computer clock shift output.
2	$\overline{\text{PRO LOGIC}}$	O	PRO LOGIC LED output.
3	$\overline{\text{3-STEREO}}$	O	3 STEREO LED output.
4	$\overline{\text{PHANTOM}}$	O	PHANTOM LED output.
5	$\overline{\text{NORMAL}}$	O	NORMAL LED output.
6	NC	–	Not used.
7	$\overline{\text{RESET}}$	I	Reset input.
8	NC	–	Not used (Connected to GND).
9	NC	–	Not used (Connected to GND).
10	VSS1	–	GND.
11	CF1	–	Connected to crystal oscillator (5.76MHz).
12	CF2	–	
13	VDD1	–	Power supply.
14	I-$\overline{\text{HOLD}}$	I	System power supply monitor AD input."H":Normal operation."L":to stop clock and main memory.
15	I-KEY1	I	KEY 1 AD input.
16	NC	–	Not used (Connected to GND).
17	I-SPEANA	I	Spectrum analyzer level AD input.
18	NC	I	Not used (Connected to GND).
19	I-JOG	I	Jog rotary encoder input.
20~23	NC	–	Not used (Connected to GND).
24	PROLOGIC	I	Input prologic switch "H" when prologic ,"L" when not prologic.
25~33	G1~G9	O	FL gird output.
34~40	S1~S7	O	FL Segment output.
41	VDD2	–	Connected to GND.
42	VP	_	Power FL display negative supply terminal.
43~63	S8~S28	O	FL Segment output.
64	NC	–	Not used.
65	$\overline{\text{LED ON}}$	O	MULTI JOG LED output.
66	$\overline{\text{LED ON}}$	O	MULTI JOG LED output.
67~69,72	NC	O	Not connected.
70	$\overline{\text{O-L FREQ ON}}$	O	Speana low frequency output.
71	$\overline{\text{O-H FREQ ON}}$	O	Speana high frequency output.
73	VSS2	–	GND.
74	SPEANA C	O	Spectrum analyzer band switch output C.
75	SPEANA B	O	Spectrum analyzer band switch output B.
76	SPEANA A	O	Spectrum analyzer band switch output A.
77	SEL	O	Spectrum analyzer band switch output .
78~79	NC	O	Not connected.
80	I/O-$\overline{\text{SERIAL}}$	I/O	Input/output serial data for communication.

IC BLOCK DIAGRAM (GE-NH1100 / NAVH1200)

IC, BA3835F

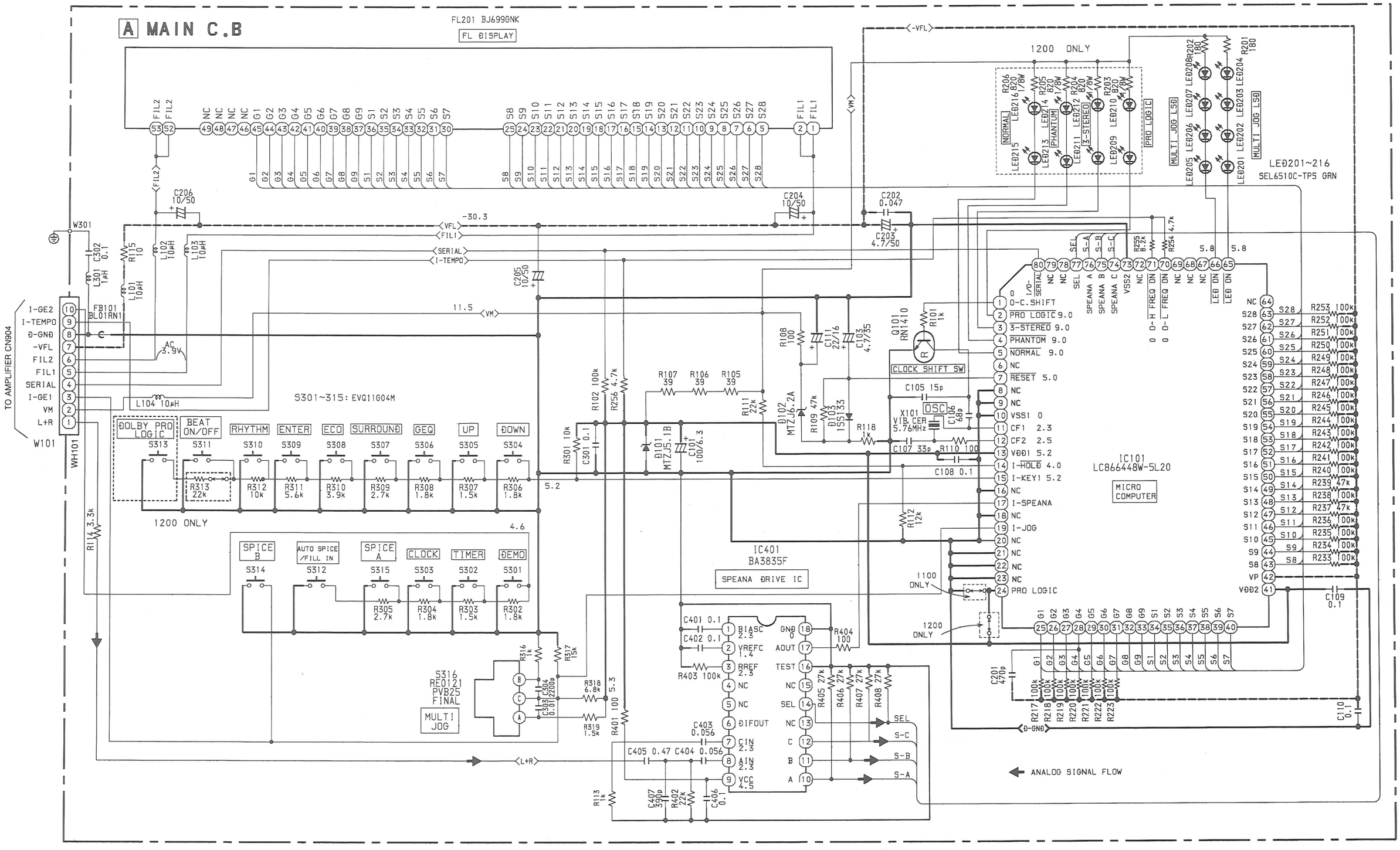


A MAIN C.B

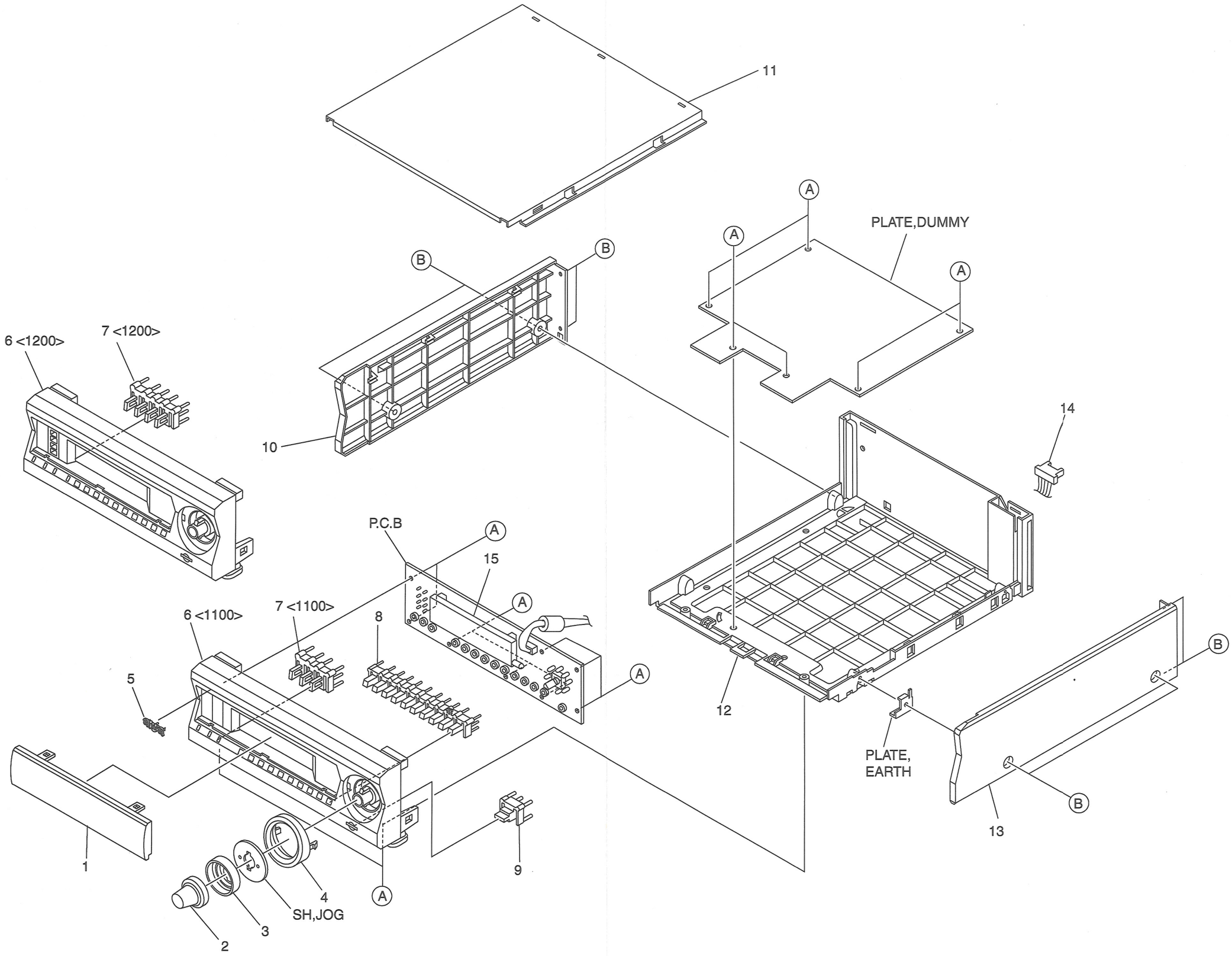


LED215, 216 NORMAL
LSD211, 212 3-STERO

LED213, 214 PHANTOM
LED209, 210 DOBLY PROLOGIC


A MAIN C.B
FL201 BJ699GNK
FL DISPLAY
1200 ONLY
LED201~216
SEL6510C-TP5 GRN
TO AMPLIFIER CN904
W301
W101
WH101
I-GE2
I-TEMPO
Ð-GNÐ
-VFL
FIL2
FIL1
SERIAL
I-GE1
VM
L+R
FB101 BL01RN1
L104 10µH
S301~315: EVQ11G04M
DOLBY PRO LOGIC
BEAT ON/OFF
RHYTHM
ENTER
ECO
SURROUND
GEQ
UP
DOWN
1200 ONLY
SPICE B
AUTO SPICE /FILL IN
SPICE A
CLOCK
TIMER
DEMO
S316 RE0121 PVB25 FINAL
MULTI JOG
IC401 BA3835F
SPEANA DRIVE IC
IC101 LC866448W-5L20
MICRO COMPUTER
CLOCK SHIFT SW
PRO LOGIC
3-STEREO
PHANTOM
NORMAL
MULTI JOG LSB
1100 ONLY
1200 ONLY
D101 MTZJ5.1B
D102 MTZJ6.2A
D103 1SS133
Q101 RN1410
X101 VIB.CER 5.76MHz
OSC
ANALOG SIGNAL FLOW

MECHANICAL EXPLODED VIEW 1 / 1 (GE-NH1100 / NAVH1200)



MECHANICAL PARTS LIST 1 / 1 (GE-NH1100 / NAVH1200)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-SU1-004-010		WINDOW,DISPLAY
2	8Z-SU1-007-010		KNOB,RTRY JOG
3	8Z-SU1-005-010		REFLECTOR,JOG
4	8Z-SU1-006-010		RING,JOG
5	87-B00-002-010		BADGE,AIWA 30 ABS SIL
6	8Z-SU1-001-010		CABI,FR<1100>
6	8Z-SUM-001-010		CABI,FR PRO<1200>
7	8Z-SU1-009-010		KEY,DEMO<1100>
7	8Z-SUM-004-010		KEY,PRO<1200>
8	8Z-SU1-008-010		KEY,GEQ
9	8Z-SU1-010-010		KEY,ENTER
10	8Z-SX1-011-010		PANEL,SIDE L
11	8Z-SU1-002-010		CABI,STEEL
12	8Z-SU1-003-010		CABI,REAR YJSNM<1100YJ>
12	8Z-SU1-021-010		CABI,REAR YSNM<1100Y>
12	8Z-SUM-003-010		CABI,REAR YJSNM<1200YSM>
12	8Z-SUM-011-110		CABI,REAR YSNM<1200YSM>
13	8Z-SX1-012-010		PANEL,SIDE R
14	8Z-SU1-608-010		CORD,52305-101BLK
15	88-SU1-201-110		GUIDE,FL
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-067-633-010		TAPPING SCREW, BVT2+3-8

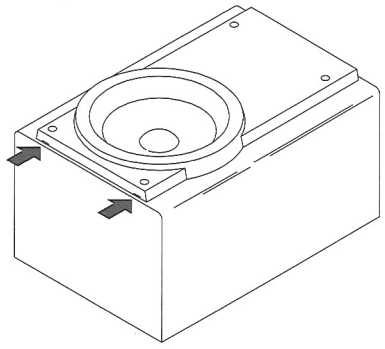
COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

SPEAKER DISASSEMBLY INSTRUCTIONS

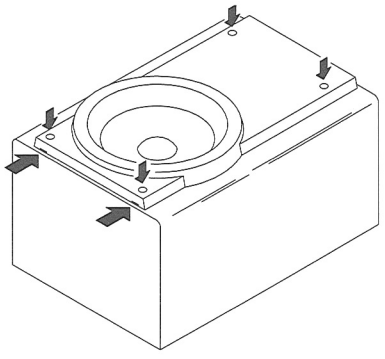
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



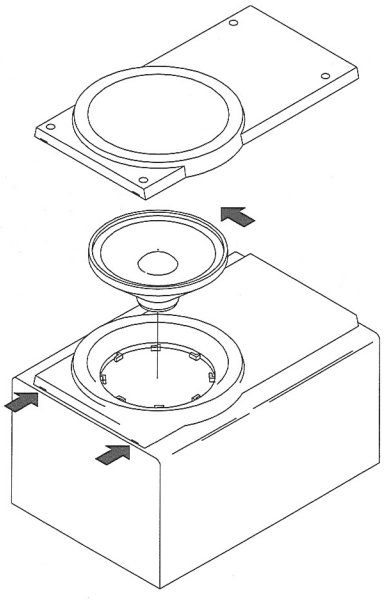
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

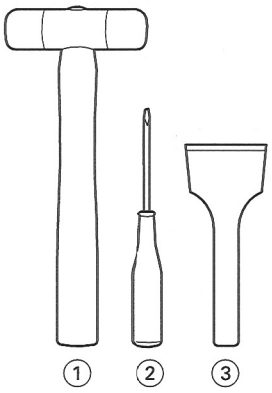


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



Type.4



TOOLS

① Plastic head hammer
② (⊖) flat head screwdriver
③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.

2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.

3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

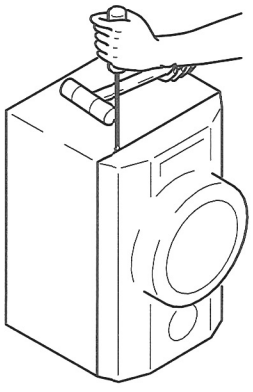


Fig-1

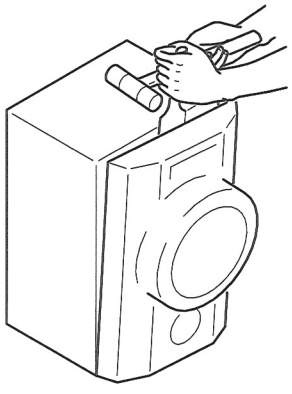


Fig-2

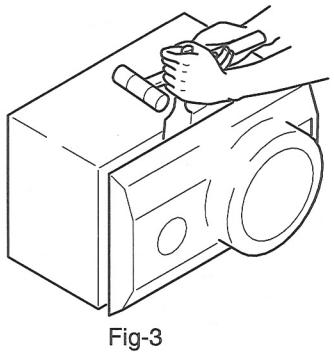


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SPEAKER PARTS LIST
SX-NAVH1200 (YBL, YTL, YJBL)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-NS5-610-010		CORD, SPKR
2	8Z-SSM-006-010		PANEL,FR L
3	8Z-SSM-001-010		PANEL,FR R
4	8Z-SSM-003-010		PANEL,TW
5	8Z-SSM-007-010		GRILLE,FRAME ASSY
6	8Z-SSM-004-010		SPACER
7	8Z-SSM-009-010		PROTECTER,TW
8	8Z-SSM-602-010		SPKR, W 150
9	8Z-NSY-608-010		SPKR, CERAMIC ASSY
10	83-MS2-603-210		SPKR,T 60
11	8Z-SSM-013-010		CABI,T<YTL>

SX-CR677 (YSTC, YJSTC)

NOTE: This SX-CR677 speaker contains SX-C607 (center speaker) and SX-R277 (rear speaker).

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-YS1-001-010		CABI,REAR<277>
2	8Z-YS1-002-010		GRILLE FRAME ASSY<277>
3	81-VSA-009-010		CORD BUSH<277>
4	87-010-384-010		CAP,E 100-25 SME<277>
5	87-YS6-002-010		SPKR, CORD Y<277>
6	8Z-YS1-601-010		SPKR, 100<277>
7	87-YS7-012-010		PANEL,FR S<607>
8	87-YS7-013-010		PANEL,REAR S<607>
9	87-YS3-003-010		GRILLE,FRAME ASSY<607>
10	83-NSM-010-010		SPKR, CORD<607>
11	81-VSA-009-010		CORD BUSH<607>
12	87-YS7-602-010		SPKR,100<607>
13	8Z-YS2-911-010		IB,YJ(ECA)Y

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-SP1-906-010		IB,EZ(9L)M<1100EZ>
1	8Z-SPM-906-010		IB,EZ(9L)M<1200EZ>
1	8Z-SP1-905-010		IB,K(E)M<1100K>
1	8Z-SPM-905-010		IB,K(E)M<1200K>
1	8Z-SP1-901-010		IB,H(ECA)M<1100HR>
1	8Z-SPM-901-010		IB,H(ECA)M<1200HR>
2	8Z-NF5-702-010		RC UNIT,ZAS04<1100>
2	8Z-NFV-702-010		RC UNIT,ZAS05<1200>
3	87-006-225-010		AM LOOP ANT NC2<EZ,K>
3	87-043-095-010		WIRE ANTENNA<1100HR>
3	87-006-269-010		AM LOOP ANT UN<1200HR>
4	87-043-106-010		WIRE, FM ANT (Z)<EZ,K>
4	87-043-115-010		ANT,FEEDER FM<HR>
⚠ 6	87-A91-017-010		PLUG, CONVERSION JT-0476<HR>

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G一　一	
G一　一	
G一　一	

アイワ株式会社
AIWA CO.,LTD.

9820543, 9820572, 9630472, 931261

Tokyo Japan

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Printed in Singapore

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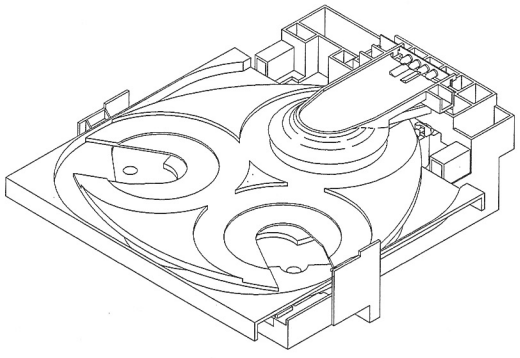
SERVICE

4ZG-1

English



SERVICE MANUAL

CD MECHANISM

BASIC CD MECHANISM : KSM-2131FAM
3ZG-2 E1
3ZG-2 E3
3ZG-2 E4

TYPE	BASIC CD MECHANISM
Z3NDSH	3ZG-2 E1
Z3RDLSHJ	3ZG-2 E3
Z3RNDSHJ	3ZG-2 E1
Z3RNDSH	3ZG-2 E1
Z3RNSMDJ	3ZG-2 E1
Z3RSHMDJ	3ZG-2 E3
PZ3MD	3ZG-2 E4
Z4RNDSH	KSM-2131 FAM
Z4RNSHMDJ	KSM-2131 FAM

aiwa

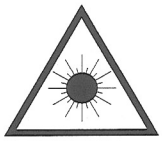
S/M Code No. 09-992-325-4N2

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

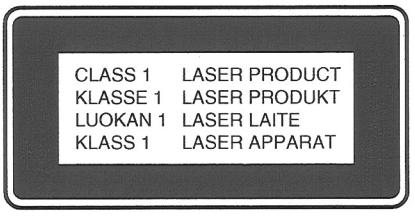
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

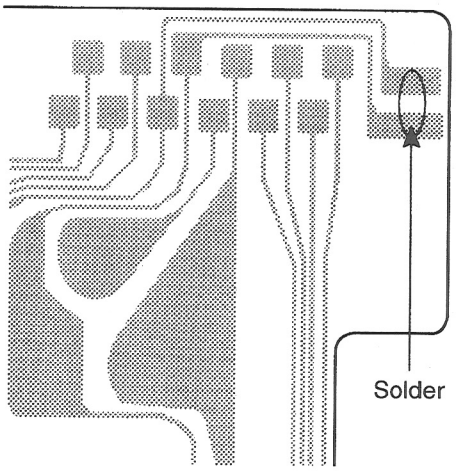


Precaution to replace Optical block (KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

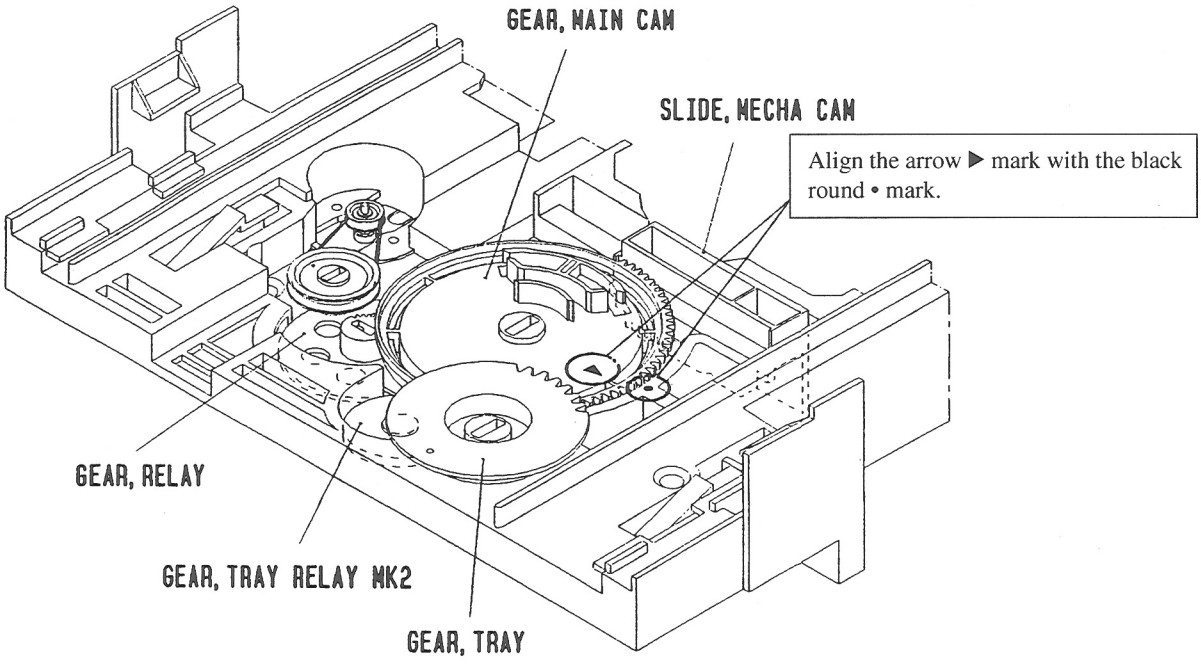
PICK-UP Assy P.C.B



How to Adjust the Rotating Phase of the Gear, Main Cam

1) Push down the hooking catch of the CHAS. MECH, and remove the TRAY.
2) Align the arrow mark of the Gear, Main Cam with the black round mark of the CHAS, MECHA as shown below.
3) Confirm that the Slide, Mech Cam is located in the right position, then insert the TRAY gently.

Caution: If the rotating phase of the Gear, Main Cam is incorrectly adjusted, the chucking operation and tray movement will have malfunction.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-446-010		C-IC,LA9241ML
	87-A20-459-010		C-IC,LC78622ED
	87-A20-445-010		IC,BA5936 <Z4RNDSH,Z4RNSHMDJ,Z3RNSMDJ,PZ3MD>
	88-NF9-621-010		IC,BA5936S <Z3NDSH,Z3RDLSHJ,Z3RNDSHJ,Z3RNDSHM>
TRANSISTOR			
	89-113-187-080		TR,2SA1318TU<Z3RNSMDJ,PZ3MD>
	87-026-609-080		TR,KTA1266GR <EXCEPT Z3RNSMDJ,PZ3MD>
	87-026-295-080		TR,DTC144TK
	87-A30-076-080		C-TR,2SC3052F
	89-406-554-580		TR,2SD655DE<EXCEPT Z4RNSHMDJ>
	87-A30-047-080		TR,CSD655E<Z4RNSHMDJ>
	87-A30-073-080		C-TR,RT1N 141C<Z3RDLSHJ,PZ3MD>
	87-A30-075-080		C-TR,2SA1235F
DIODE			
	87-A40-527-080		DIODE,1SS133 T-91S
	87-020-465-080		DIODE,1SS133 (110MA) <EXCEPT PZ3MD>
	87-A40-470-080		DIODE,1SS254<PZ3MD>
3CD C.B			
C11	87-012-393-080		C-CAP,S 0.22-16 R K
C12	87-012-157-020		C-CAP,S 330P-50 CH
C13	87-016-369-080		C-CAP,S 0.033-25 B K
C14	87-A10-201-080		C-CAP,S0.33-16 KB
C15	87-010-213-020		C-CAP,S 0.015-25 B
C16	87-016-083-080		C-CAP,S 0.15-16 RK
C17	87-010-184-020		C-CAP,S 3300P-50 B
C18	87-016-083-080		C-CAP,S 0.15-16 RK
C19	87-010-198-020		C-CAP,S 0.022-25 B<EXCEPT PZ3MD>
C19	87-016-369-080		C-CAP,S 0.033-25 B K<PZ3MD>
C20	87-010-178-020		C-CAP,S 1000P-50 B
C21	87-012-393-080		C-CAP,S 0.22-16 R K
C22	87-016-083-080		C-CAP,S 0.15-16 RK
C23	87-010-197-020		C-CAP,S 0.01-25 B
C24	87-010-186-020		C-CAP,S 4700P-50 B
C25	87-010-400-040		CAP,E 0.47-50
C26	87-010-322-020		C-CAP,S 100P-50 CH
C27	87-010-382-040		CAP,E 22-25 SME
C28	87-010-545-040		CAP,E 0.22-50 SME
C29	87-010-184-020		C-CAP,S 3300P-50 B
C31	87-010-186-020		C-CAP,S 4700P-50 B
C32	87-010-315-020		C-CAP,S 27P-50 CH<EXCEPT PZ3MD>
C32	87-010-312-080		C-CAP,S 15P-50 CH<PZ3MD>
C33	87-016-081-080		C-CAP,S 0.1-16 RK
C35	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C37	87-010-405-080		CAP, ELECT 10-50V
C38	87-010-263-080		CAP, ELECT 100-10V
C39	87-010-596-020		C-CAP,S 0.047-16 RK
C40	87-010-401-080		CAP, ELECT 1-50V
C41	87-010-805-080		CAP, S 1-16
C42	87-010-263-080		CAP, ELECT 100-10V
C43	87-010-197-020		C-CAP,S 0.01-25 B
C44	87-010-263-080		CAP, ELECT 100-10V
C46	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C47	87-010-260-080		CAP, ELECT 47-25V
C48	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C49	87-010-404-080		CAP, ELECT 4.7-50V
C50	87-010-197-020		C-CAP,S 0.01-25 B
C51	87-010-263-040		CAP,E 100-10
C52	87-012-156-080		C-CAP,S 220P-50 CH
C101	87-016-369-020		C-CAP,S 0.033-25 B K
C102	87-016-081-080		C-CAP,S 0.1-16 RK
C103	87-010-321-020		C-CAP,S 82P-50 CH
C104	87-012-154-020		C-CAP,S 150P-50 J CH GRM
C105	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C109	87-010-197-020		C-CAP,S 0.01-25 B
C111	87-010-312-020		C-CAP,S 15P-50 J CH
C112	87-010-154-020		C-CAP,S 10P-50 CH
C113	87-010-322-020		C-CAP,S 100P-50 CH
C115	87-010-404-080		CAP, ELECT 4.7-50V
C116	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C117	87-010-263-040		CAP,E 100-10
C118	87-010-178-020		C-CAP,S 1000P-50 B
C119	87-010-154-020		C-CAP,S 10P-50 CH
C121	87-010-403-080		CAP, ELECT 3.3-50V
C122	87-010-403-080		CAP, ELECT 3.3-50V
C123	87-012-157-020		C-CAP,S 330P-50 CH
C124	87-012-157-020		C-CAP,S 330P-50 CH
C131	87-010-382-080		CAP, ELECT 22-25V
C191	87-010-263-040		CAP,E 100-10
C301	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C302	87-010-382-080		CAP, ELECT 22-25V
C303	87-010-260-040		CAP,E 47-25 SME
C501	87-A10-730-080		CAP,E 1000-16 SMG
C502	87-010-197-020		C-CAP,S 0.01-25 B
C504	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C505	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C506	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C507	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C509	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C510	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C603	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C610	87-010-405-080		CAP, ELECT 10-50V
C611	87-010-405-080		CAP, ELECT 10-50V
C701	87-010-405-040		CAP,E 10-50
C705	87-010-197-020		C-CAP,S 0.01-25 B
C706	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C707	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
C711	87-010-322-020		C-CAP,S 100P-50 CH
C712	87-010-322-020		C-CAP,S 100P-50 CH
C713	87-010-322-020		C-CAP,S 100P-50 CH
C901	87-010-260-080		CAP, ELECT 47-25V
C902	87-010-196-020		C-CAP,S 0.1-25 Z F GRM
CON3	84-ZG1-648-010		CONN ASSY,6P<Z4RNDSH,Z4RNSHMDJ>
CON3	87-099-199-010		CONN,6P 6216 H <EXCEPT Z4RNDSH,Z4RNSHMDJ>
CON4	87-099-212-010		CONN,5P 6216 V
CON5	87-099-199-010		CONN,6P 6216 H
CON6	87-099-030-010		CONN,13P 6216H
CON8	87-A60-248-010		CONN,16P H CFF1416 <Z4RNDSH,Z4RNSHMDJ>
CON8	87-A60-429-010		CONN,16P H TOC-A <EXCEPT Z4RNDSH,Z4RNSHMDJ>
CON9	87-009-345-010		CONN,2P PH H <Z4RNSHMDJ,Z3RNSMDJ,PZ3MD>
FC1	85-NFT-611-110		FF-CABLE 16P-1.0
FC4	84-ZG1-672-010		F-CABLE,5P 1.25 210MM WHITE N
FC5	84-ZG1-630-010		CABLE FFC 6P-1.25 <EXCEPT Z4RNDSH,Z4RNSHMDJ>
L11	87-005-602-080		COIL,10UH LAV35 J
L101	87-005-614-080		COIL 100UH LAV35 J
L102	87-005-602-080		COIL,10UH LAV35 J
L902	87-A50-189-080		C-COIL,S BLM21B272S <Z4RNSHMDJ,Z3RNSMDJ,PZ3MD>
LED901	87-A40-558-010		LED,SLZ-8128A-01-A<EXCEPT PZ3MD>
LED901	87-A40-123-010		LED,SLZ-8128A-01-B<PZ3MD>
M601	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
R50	88-118-124-020		C-RES,S 120K-1/10W J <EXCEPT PZ3MD>
R51	88-118-124-020		C-RES,S 120K-1/10W J <EXCEPT PZ3MD>

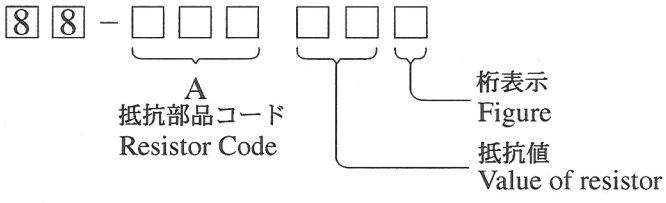
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
R52	88-118-124-020		C-RES,S 120K-1/10W J <EXCEPT PZ3MD>
R53	88-118-124-020		C-RES,S 120K-1/10W J <EXCEPT PZ3MD>
SFR101	87-A90-787-080		SFR,100K H HOKU
SW701	87-036-109-010		PUSH SWITCH
SW702	87-036-109-010		PUSH SWITCH
X101	87-A70-046-010		VIB,XTAL 16.934MHZ
LED C.B<Z3RDLSHJ,PZ3MD>			
LED701	87-A40-316-080		LED,SLR-56PCT31 GRN<PZ3MD>
LED702	87-A40-316-080		LED,SLR-56PCT31 GRN<Z3RDLSHJ>
LED702	87-A40-268-080		LED,SLH-56DCT31 ORN<PZ3MD>
LED703	87-A40-268-080		LED,SLH-56DCT31 ORN <Z3RDLSHJ,PZ3MD>
LED704	87-A40-316-080		LED,SLR-56PCT31 GRN<PZ3MD>
T-T C.B			
C401	87-A11-148-080		CAP,TC U 0.1-50 Z F
CON401	86-NFZ-675-010		CONN,5P H 6216-11H
M401	87-045-364-010		MOTOR(BCH3B14)
PS401	87-026-573-010		IC,GP1S53V <Z4RNDSH,Z4RNSHMDJ,Z3RNSMDJ,PZ3MD>
PS401	88-NF9-627-010		SNSR,SG-240 <Z3NDSH,Z3RDLSHJ,Z3RNDSHJ,Z3RNDSHM>

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
DRIVE C.B<EXCEPT Z4RNDSH,Z4RNSHMDJ>			
M1	87-045-358-010		MOT,RF-310TA 43 <EXCEPT Z4RNDSH,Z4RNSHMDJ>
M2	87-045-356-010		MOT,RF-310TA 30 <EXCEPT Z4RNDSH,Z4RNSHMDJ>
SW1	87-A90-042-010		SW,MSW-17310MVPO <EXCEPT Z4RNDSH,Z4RNSHMDJ>
MOTOR C.B<Z4RNDSH,Z4RNSHMDJ>			
M2	9X-262-513-210		SLED MOTOR<Z4RNDSH,Z4RNSHMDJ>
PIN3	91-564-722-110		CONNECTOR 6P<Z4RNDSH,Z4RNSHMDJ>
SW1	91-572-085-110		LEAF SW<Z4RNDSH,Z4RNSHMDJ>

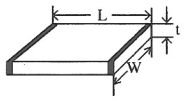
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

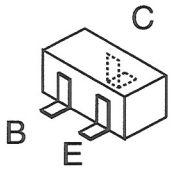
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

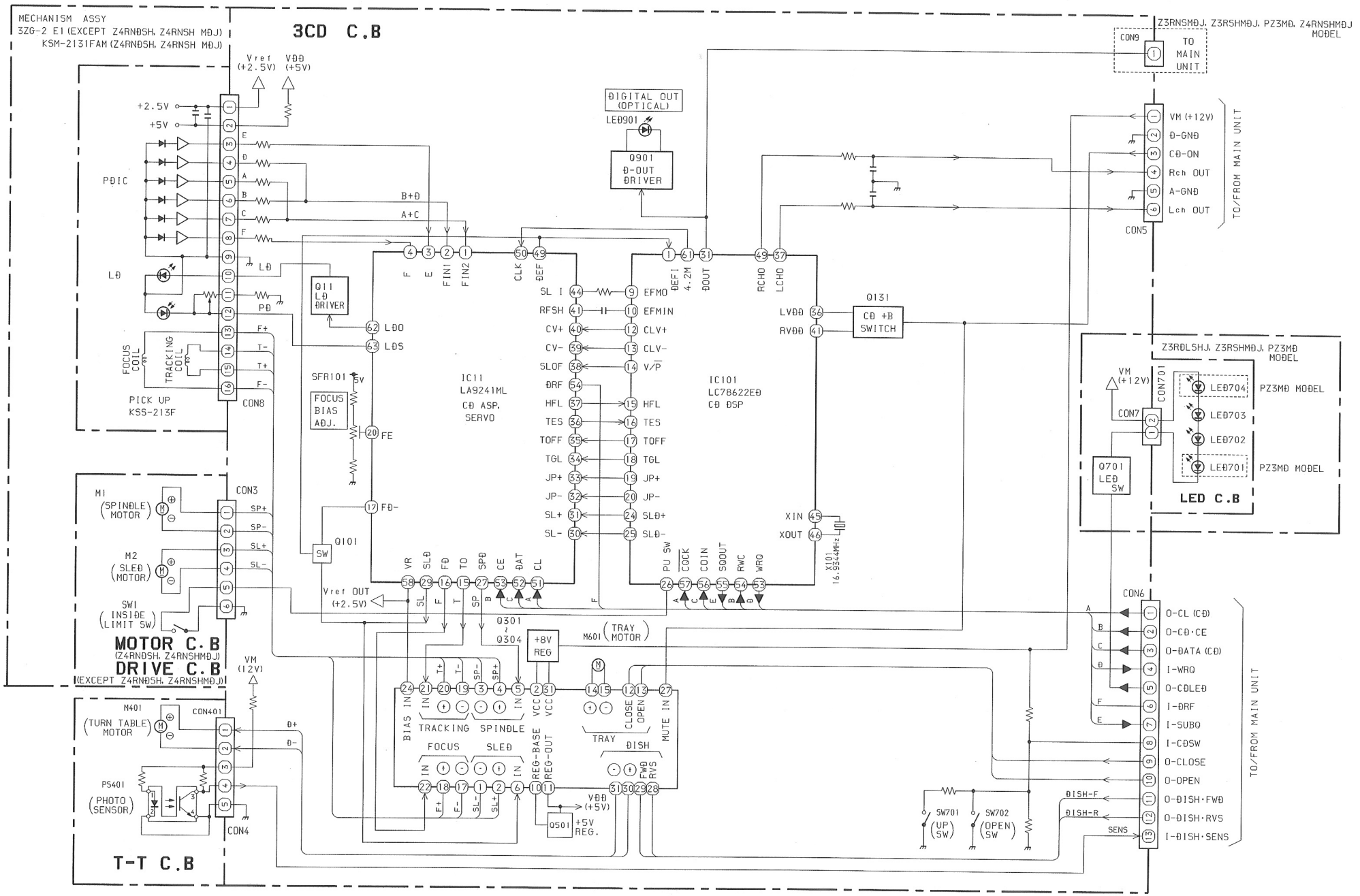
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

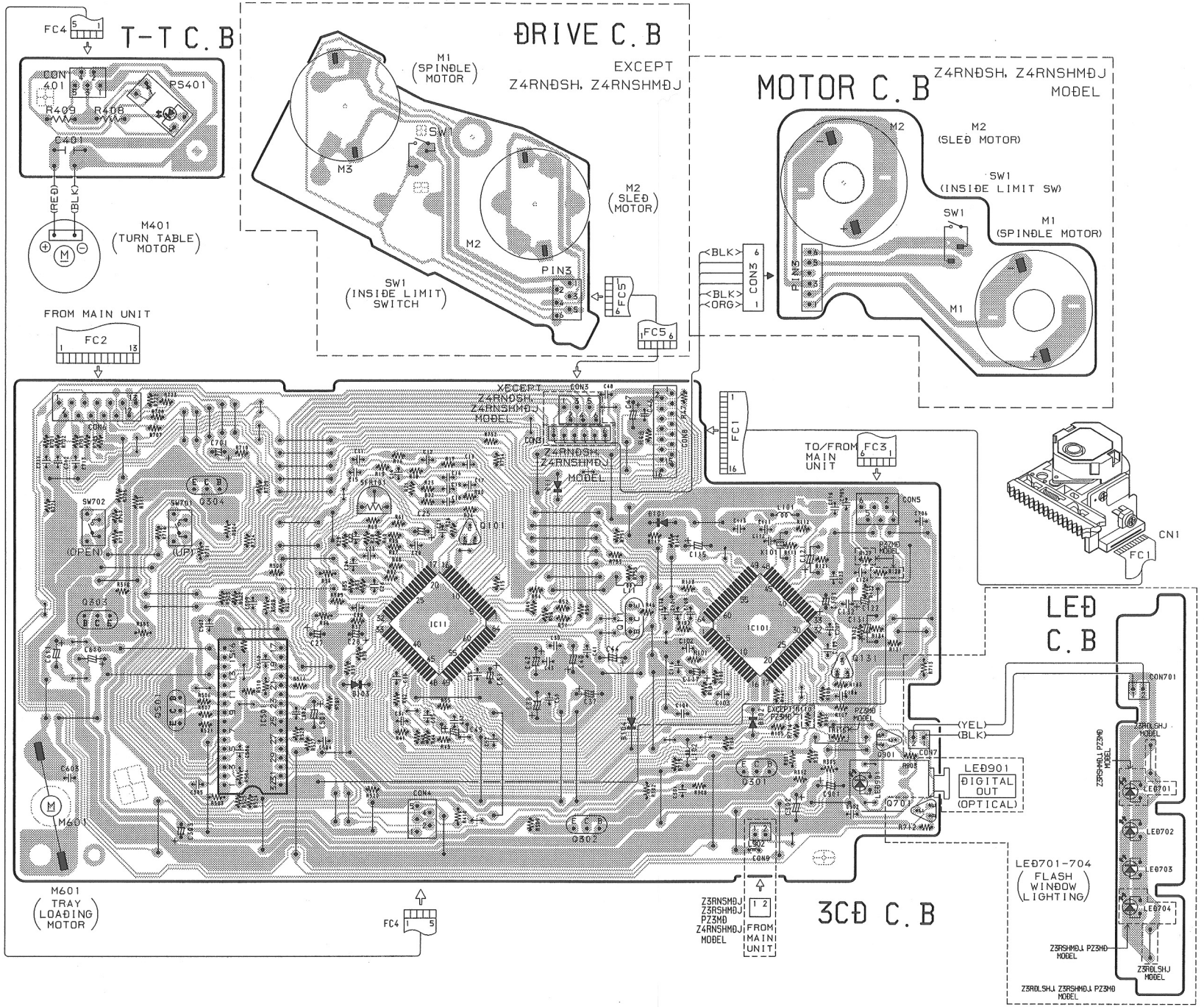
TRANSISTOR ILLUSTRATION

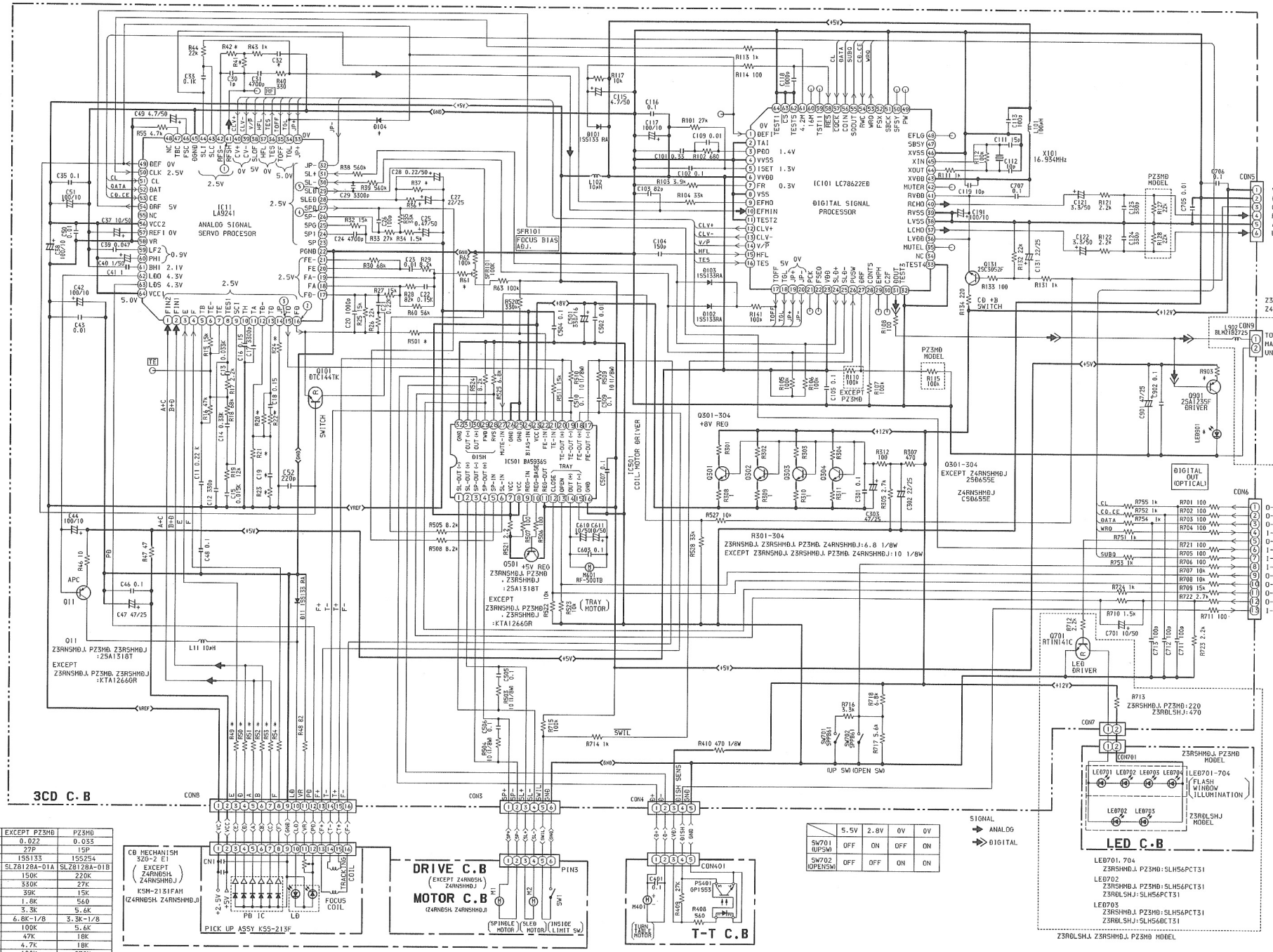


2SA1235
2SC3052
DTC144TK

2SD655
KTA1266


MECHANISM ASSY
3ZG-2 E1 (EXCEPT Z4RNØSH, Z4RNSH MØJ)
KSM-2131FAM (Z4RNØSH, Z4RNSH MØJ)
3CD C.B
Z3RNSMØJ, Z3RSHMØJ, PZ3MØ, Z4RNSHMØJ MODEL
CON9
TO MAIN UNIT
DIGITAL OUT (OPTICAL)
LEØ901
Q901 Ø-OUT DRIVER
VM (+12V)
Ø-GNØ
CØ-ON
Rch OUT
A-GNØ
Lch OUT
CON5
TO/FROM MAIN UNIT
Vref (+2.5V)
VØØ (+5V)
+2.5V
+5V
PØIC
LØ
PØ
Q11 LØ ØRIVER
FOCUS COIL
TRACKING COIL
PICK UP KSS-213F
CON8
SFR101
FOCUS BIAS AØJ.
IC11 LA9241ML CØ ASP, SERVO
IC101 LC78622EØ CØ ØSP
Q131 CØ +B SWITCH
LVØØ
RVØØ
XIN
XOUT
X101 16.9344MHz
Z3RØLSHJ, Z3RSHMØJ, PZ3MØ MODEL
CON701
CON7
LEØ704
LEØ703
LEØ702
LEØ701
PZ3MØ MODEL
Q701 LEØ SW
LED C.B
M1 (SPINØLE MOTOR)
M2 (SLEØ MOTOR)
SW1 (INSIØE LIMIT SW)
CON3
MOTOR C.B
(Z4RNØSH, Z4RNSHMØJ)
DRIVE C.B
(EXCEPT Z4RNØSH, Z4RNSHMØJ)
Q101
Vref OUT (+2.5V)
Q301 ~ Q304
+8V REG
M601 (TRAY MOTOR)
CON6
O-CL (CØ)
O-CØ·CE
O-DATA (CØ)
I-WRQ
O-CØLEØ
I-ØRF
I-SUBQ
I-CØSW
O-CLOSE
O-OPEN
O-ØISH·FWØ
O-ØISH·RVS
I-ØISH·SENS
TO/FROM MAIN UNIT
VM (12V)
M401 (TURN TABLE MOTOR)
CON401
PS401 (PHOTO SENSOR)
CON4
T-T C.B
TRACKING
SPINØLE
FOCUS
SLEØ
TRAY
ØISH
SW701 (UP SW)
SW702 (OPEN SW)
Q501 +5V REG.


T-T C.B
FC4
CON401
PS401
R409
R406
C401
(RED)
(BLK)
M401
(TURN TABLE MOTOR)
DRIVE C.B
EXCEPT Z4RNDSH, Z4RNSHMDJ
M1
(SPINDLE MOTOR)
M2
(SLED MOTOR)
M3
SW1
(INSIDE LIMIT SWITCH
PIN3
FC5
MOTOR C.B
Z4RNDSH, Z4RNSHMDJ MODEL
M2
(SLED MOTOR)
SW1
(INSIDE LIMIT SW)
M1
(SPINDLE MOTOR)
<BLK>
<BLK>
<ORG>
CON3
FROM MAIN UNIT
FC2
XCEPT Z4RNDSH, Z4RNSHMDJ MODEL
Z4RNDSH, Z4RNSHMDJ MODEL
FC1
TO/FROM MAIN UNIT
FC3
CN1
SW702
SW701
(OPEN)
(UP)
IC101
LED
C.B
CON701
(YEL)
(BLK)
LED901
DIGITAL OUT
(OPTICAL)
LED701-704
(FLASH WINDOW LIGHTING)
LED701
LED702
LED703
LED704
Z3RDLSHJ MODEL
Z3RSHMDJ PZ3MD MODEL
Z3RDLSHJ Z3RSHMDJ PZ3MD MODEL
M601
(TRAY LOADING MOTOR)
FC4
Z3RNSMDJ Z3RSHMDJ PZ3MD Z4RNSHMDJ MODEL
FROM MAIN UNIT
3CD C.B



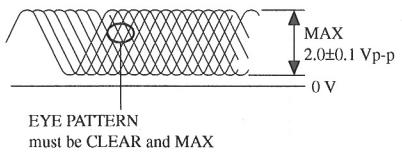
*

	EXCEPT PZ3MD	PZ3MD
C19	0.022	0.033
C32	27P	15P
D104	1SS133	1SS254
LED901	SLZ8128A-01A	SLZ8128A-01B
R20	150K	220K
R21	330K	27K
R22	39K	15K
R23	1.8K	560
R24	3.3K	5.6K
R56	6.8K-1/8	3.3K-1/8
R37	100K	5.6K
R41	47K	18K
R42	4.7K	18K
R49, 54	180K	270K
R50-53	120K	180K
R61	100K	390K
R501	3.9K	4.7K
R903	470	390

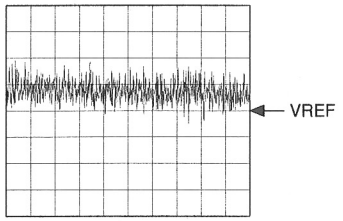
	5.5V	2.8V	0V	0V
SW701 (UPSW)	OFF	OFF	ON	OFF
SW702 (OPENSW)	OFF	OFF	ON	ON

WAVE FORM

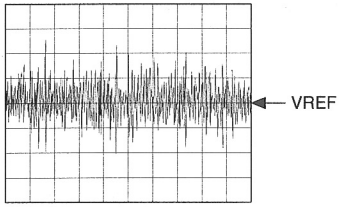
① IC11 Pin ㊶ (RFSM) VOLT/DIV: 0.5V
TIME/DIV: 1μS



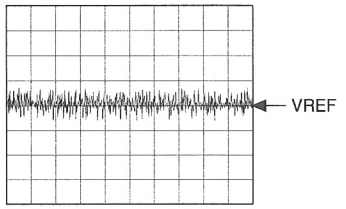
② IC11 Pin ⑯ (FD) VOLT/DIV: 100mV
TIME/DIV: 1mS



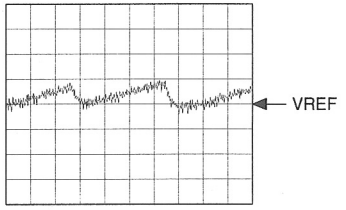
③ IC11 Pin ⑮ (TO) VOLT/DIV: 100mV
TIME/DIV: 1mS



④ IC11 Pin ㉗ (SPD) VOLT/DIV: 100mV
TIME/DIV: 1mS

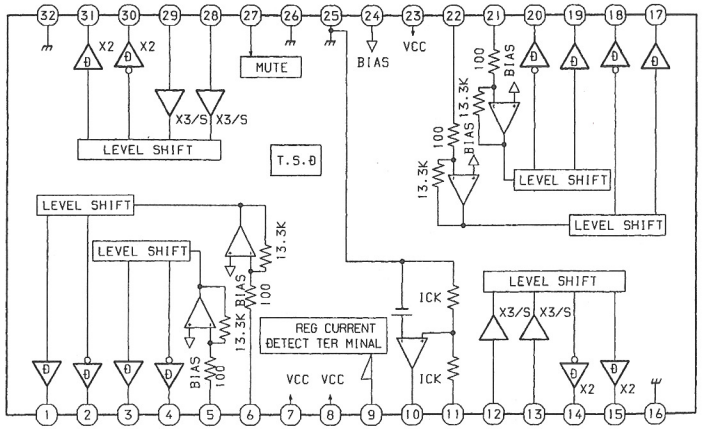


⑤ IC11 Pin ㉙ (SLD) VOLT/DIV: 200mV
TIME/DIV: 2S



IC BLOCK DIAGRAM

IC, BA5936



IC DESCRIPTION
IC, LA9241M

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE–	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES "Track Error Sense" comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD–	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD–	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD– and FA– pins.
19	FA–	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE–	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	AGND	—	Analog signal GND.
23	NC	—	No connection.
24	SP	O	Single ended output of the CV+ and CV– pin input signal.
25	SPG	I	Pin to which external spindle gain setting resistor in 12 cm mode is connected.
26	SP–	I	Pin to which external spindle phase compensation constants are connected together with SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin to which external sled phase compensation constants are connected.
29	SLD	O	Sled control signal output pin.
30, 31	SL–, SL+	I	Sled advance signal input pin from microprocessor.
32, 33	JP–, JP+	I	Tracking jump signal input pin from DSP.
34	TGL	I	Tracking gain control signal input from DSP. Low gain when TGL = H.
35	TOFF	I	Tracking off control signal input pin from DSP. Off when TOFF = H.

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	"High Frequency Level" is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV–, CV+	I	CLV error signal input pin from DSP.
41	RFSM	O	RF output pin.
42	RFS–	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	"Slice Level Control" is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	DGND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	"Tracking Balance Control" EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	"Detect RF" RF level detector output.
55	FSS	I	"Focus Search Select" focus search mode (± search/+ search) select pin.
56	VCC2	—	Servo system and digital system Vcc pin.
57	REFI	—	Pin to which external bypass capacitor for reference voltage is connected.
58	VR	O	Reference voltage output pin.
59	LF2	I	Disc defect detector time constant setting pin.
60	PH1	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BH1	I	Pin to which external capacitor for RF signal bottom holding is connected.
62	LDD	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	—	RF system Vcc pin.

IC, LC78622ED

Pin No.	Pin Name	I/O	Description	
1	DEFI	I	Defect sense signal (DEF) input pin. (Connect to 0V when not used).	
2	TAI	I	For PLL.	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
3	PDO	O		Phase comparator output pin to control external VCO.
4	VVSS	—		GND pin for built-in VCO. Be sure to connect to 0V.
5	ISET	I		Pin to which external resistor adjusting the PD0 output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—	Digital system GND. Be sure to connect to 0V.	
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	TEST2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLV–	O	Disc motor control output. Three level output is possible using command.	
14	$\overline{V/P}$	O	Rough servo or phase control automatic selection monitoring output pin. Rough servo at H. Phase servo at L.	
15	HFL	I	Track detect signal input pin. Schmidt input.	
16	TES	I	Tracking error signal input pin. Schmidt input.	
17	TOFF	O	Tracking OFF output pin.	
18	TGL	O	Tracking gain selection output pin. Gain boost at L.	
19, 20	JP+, JP–	O	Track jump control signal output pin. Three level output is possible using command.	
21	PCK	O	EFM data playback clock monitoring pin 4.3218 MHz when phase is locked in.	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and thesync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24-28	SL+ - PUIN	I/O	General purpose input/output pin 1 to 5.	The pin is controlled by the serial data command from microprocessor. When the pin is not used, set the pin to the input terminal and connect to 0V, or alternately set the pin to output terminal and leave the pin open.
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H.	
30	C2F	O	C2 flag output pin.	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format).	
32, 33	TEST3, TEST4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not used. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin.
36	LVDD	—		L-channel power supply pin.
37	LCHO	O		L-channel output pin.
38	LVSS	—		L-channel GND. Be sure to connect to 0V.
39	RVSS	—	R-channel 1-bit DAC.	R-channel GND. Be sure to connect to 0V.
40	RCHO	O		R-channel output pin.
41	RVDD	—		R-channel power supply pin.
42	MUTER	O		R-channel mute output pin.

Pin No.	Pin Name	I/O	Description
43	XVDD	—	Crystal oscillator power supply pin.
44	XOUT	O	Pin to which external 16.9344 MHz crystal oscillator is connected.
45	XIN	I	
46	XVSS	—	Crystal oscillator GND pin. Be sure to connect to 0V.
47	SBSY	O	Subcode block sync signal output pin.
48	EFLG	O	C1, C2, single and dual correction monitoring pin.
49	PW	O	Subcode P, Q, R, S, T, U and W output pin.
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby.
51	SBCK	I	Subcode read clock input pin. Schmidt input. (Be sure to connected to 0V when not in use.)
52	FSX	O	Pin outputting the 7.35 kHz sync signal which is generated by dividing frequency of crystal oscillator.
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	$\overline{\text{CQCK}}$	I	Command input read clock or subcode read input clock from SQOUT pin
58	$\overline{\text{RES}}$	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	TST11	O	Test signal output pin. Use this pin as open (normally L output).
60	16M	O	16.9344 MHz output pin.
61	4.2M	O	4.2336 MHz output pin.
62	TEST5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	$\overline{\text{CS}}$	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	TEST1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

Note: The same potential must be applied to the respective power supply terminals. (VDD, VVDD, LVDD, RVDD, XVDD)

TEST MODE

1. How to Activate CD Test Mode
   Insert the AC plug while pressing the function CD button.
   All FL display tubes will light up, and the test mode will be activated.

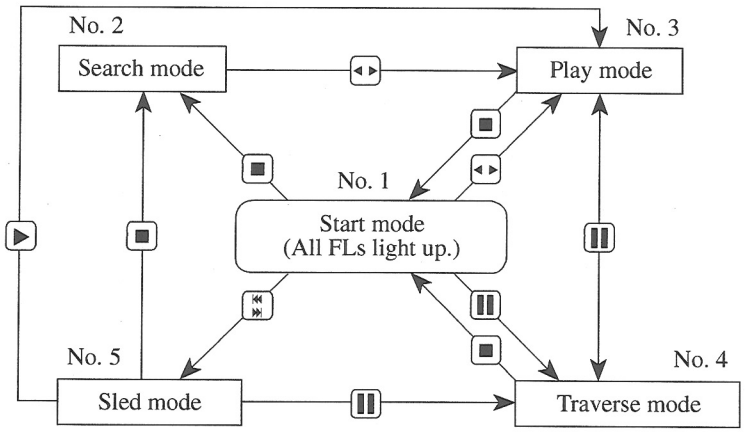
2. How to Cancel CD Test Mode
   Either one of the following operations will cancel the CD test mode.
   - Press the function button. (except CD function button)
   - Press the power switch button.
   - Disconnect the AC plug

3. CD Test Mode Functions
   When test mode is activated, the following mode functions from No.1 to No.5 can be used by pressing the operation keys.

Mode/No.	Operation	FL display	Operation	Contents
Start mode No.1	Activation	All lamps light	• Test mode is activated. • CD block power is ON.	• FL display check (All displays light.)
Search mode No.2	■ key		• Laser diode turns always ON. • Continual focus search (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes. * NOTE 1	• APC circuit check • Laser current measurement (Laser current control. Across a resistor connected between emitter and GND.) FOCUS SERVO • Check focus search waveform • Check focus error waveform (FOK/FZC are not monitored in the search mode)
Play mode No.3	◀ ▶ key		• Normal playback • Focus search is continued if TOC cannot be read. * NOTE 1	FOCUS SERVO/TRACKING SERVO CLV SERVO/SLED SERVO Check DRF
Traverse mode No.4	▮▮ key		• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON/OFF Tracking balance (traverse) check
Sled mode No.5	⏮ key ⏭	All lamps light	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

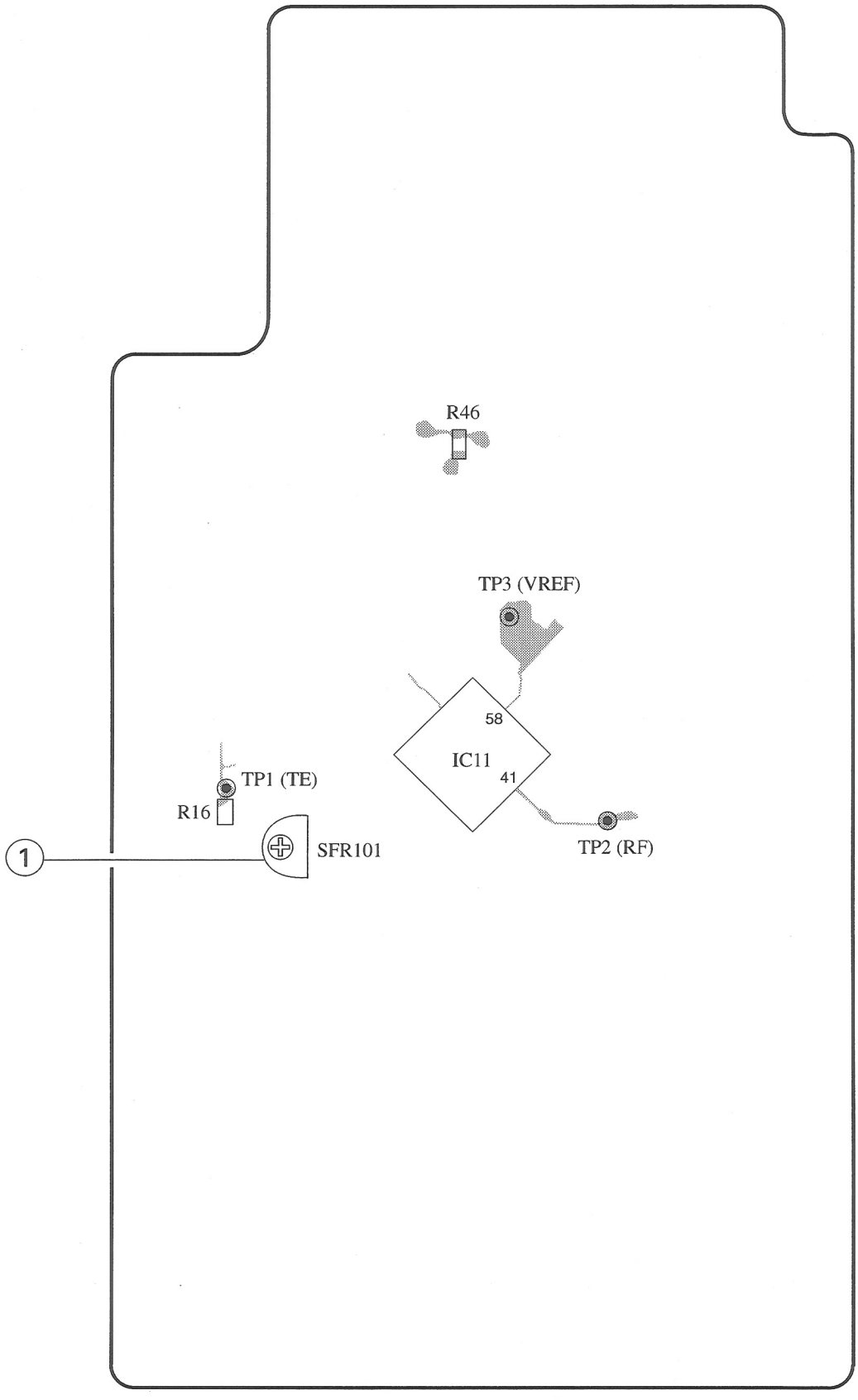
* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.
* NOTE 2: Do not press the ⏮ or ⏭ keys when the machine is in the ▮▮ status is active. If they are pressed, playback will not be possible after the ▮▮ status has been canceled. If the ⏮ or ⏭ keys are pressed in the ▮▮ status, press the ■ key and return to the start mode (No.1).
* NOTE 3: When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.

4. Operation Outline
   The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



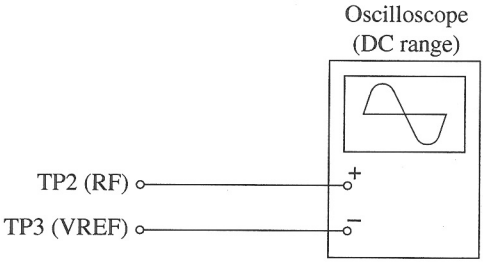
If the DISC DIRECT PLAY button is pressed, the machine performs the same operation as the PLAY button is pressed as shown. If the tray is opened by pressing OPEN/CLOSE button during Play mode or Traverse mode, the machine returns to the Start mode.

3CD C.B (PATTERN SIDE)

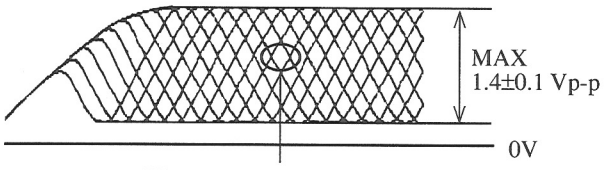


Note: • Connect a probe (10: 1) of the oscilloscope test point for adjustment.
• Connect ground (⊖) terminal of oscilloscope probe to TP3 (VREF) for all adjustment.

1. Focus Bias Adjustment
Make the focus bias adjustment when replacing and repairing the optical block.



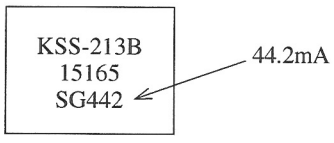
1) Connect an oscilloscope to test points TP2 (RF) and TP3 (VREF).
2) Turn on the power switch.
3) Insert test disc TCD-782 (YEDS-18) and play back the second program.
4) Adjust SFR101 so that RF signal of the test point TP2 (RF) is MAX and CLEARREST.



EYE PATTERN
must be CLEAR and MAX.

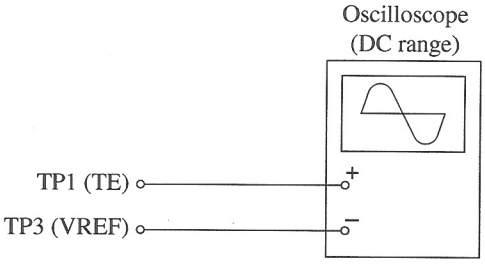
VOLT/DIV: 0.5V
TIME/DIV: 0.5μS

Note: The current of the laser signal can be checked with the voltages on both sides of R46 (voltage across 10Ω). The difference for the specified value shown on the label must be within ± 6.0mA.

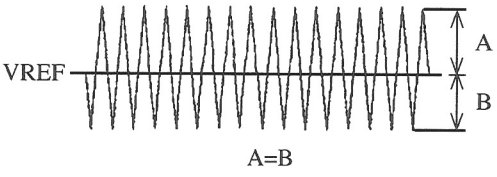


$$\text{Laser current Iop} = \frac{\text{Voltage across R46}}{10\Omega}$$

2. Tracking Balance Check



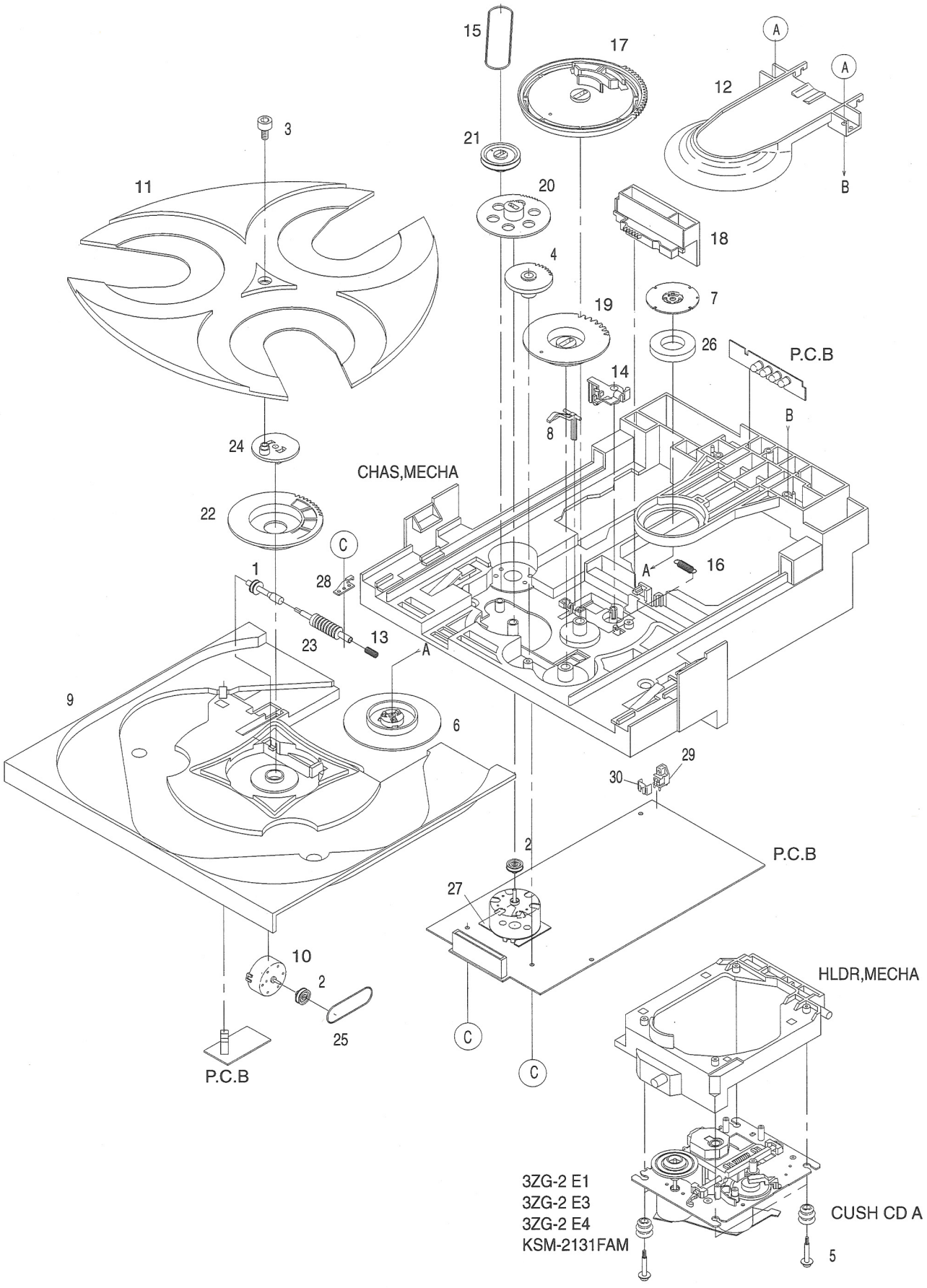
1) Connect an oscilloscope to test points TP1 (TE) and TP3 (VREF).
2) Start up the CD test mode.
3) Insert the test disc TCD-782 (YEDS-18) and enter the traverse mode of the CD test mode.
4) Confirm that the traverse waveform on an oscilloscope is vertically symmetrical as shown in the figure below.
5) After confirming the waveform, release the CD test mode.



A=B

VOLT/DIV: 20mV
TIME/DIV: 1mS

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

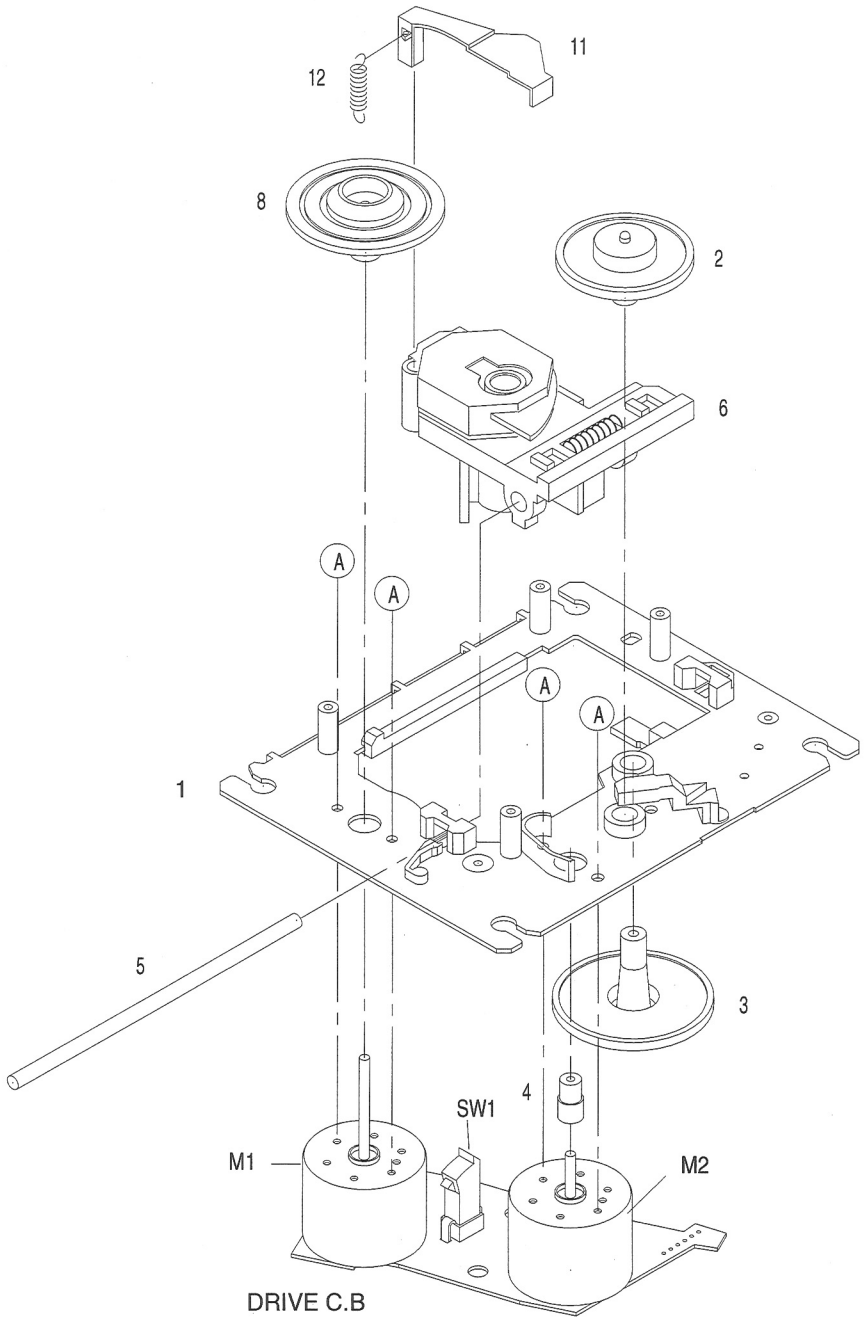
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG1-239-210		PULLY,WORM N
2	84-ZG1-267-010		PULLEY,LOAD MO 8 <EXCEPT Z4RNDSH,Z4RNSHMDJ,PZ3MD>
2	81-ZG1-212-010		PULLY,LOAD MO <Z4RNDSH,Z4RNSHMDJ,PZ3MD>
3	81-ZG1-239-010		S-SCREW,TT
4	81-ZG1-291-110		GEAR,TRAY RELAY NO3
5	81-ZG1-271-010		S-SCREW MECH REAR
6	84-ZG1-290-010		HLDR,MAGNET J NAT <Z4RNSHMDJ,Z3RNDSHJ,Z3RNSMDJ>
6	84-ZG1-295-010		HLDR,MAGNET JV<Z3RDLSHJ>
6	84-ZG1-289-010		HLDR,MAGNET NAT <Z4RNDSH,Z3NDSH,Z3RNDSHM>
7	81-ZG1-229-110		PLATE,MAGNET <Z4RNDSH,Z4RNSHMDJ,PZ3MD>
7	81-ZG1-255-110		PLATE,MAGNET MK2 <EXCEPT Z4RNDSH,Z4RNSHMDJ,PZ3MD>
8	83-ZG3-213-010		LVR,SW
9	84-ZG1-003-310		TRAY,NO2-B<Z3NDSH,PZ3MD>
9	84-ZG1-008-210		TRAY,NO3<EXCEPT Z3NDSH,PZ3MD>
10	87-045-364-010		MOTOR(BCH3B14)
11	84-ZG1-005-210		TURNTABLE,NO1(*)
12	84-ZG1-011-010		REFLECTOR,CD<Z3RDLSHJ,PZ3MD>
13	84-ZG1-248-010		SPR-C,WORM
14	84-ZG1-208-210		LEVER,CAM<PZ3MD>
14	84-ZG1-266-010		LEVER,CAN 8<EXCEPT PZ3MD>
15	84-ZG1-209-010		BELT,SQ1.8-117.7
16	84-ZG1-211-010		SPR-E CAM S
17	84-ZG1-203-410		GEAR,MAIN CAM <EXCEPT Z3RDLSHJ,PZ3MD>
17	84-ZG1-215-410		GEAR,MAIN CAM BLU<Z3RDLSHJ,PZ3MD>
18	84-ZG1-216-310		SLIDE,MECHA CAM YEL <Z3RDLSHJ,PZ3MD>
18	84-ZG1-204-310		SLIDER,MECHA CAM <EXCEPT Z3RDLSHJ,PZ3MD>
19	84-ZG1-205-210		GEAR,TRAY (*)
20	84-ZG1-206-110		GEAR,RELAY<PZ3MD>
20	84-ZG1-274-010		GEAR,RELAY 8<EXCEPT PZ3MD>
21	84-ZG1-207-010		PULLEY,RELAY
22	84-ZG1-221-010		GEAR,MAIN TT<PZ3MD>
22	84-ZG1-269-010		GEAR,MAIN TT 4<EXCEPT PZ3MD>
23	84-ZG1-238-010		GEAR,WORM N
24	84-ZG1-224-010		LEVER,TT<Z3RDLSHJ,PZ3MD>
24	84-ZG1-288-010		LEVER,TT NAT <EXCEPT Z3RDLSHJ,PZ3MD>
25	84-ZG1-225-010		BELT,SQ1.0-63.3
26	84-ZG1-300-010		MAGNET,CLAMPER 4P <EXCEPT Z4RNDSH,Z3RDLSHJ,Z4RNSHMDJ>
26	84-ZG1-296-010		MAGNET,CLAMPER 93ZZ<Z3RDLSHJ>
26	84-ZG1-268-010		MAGNET,CLAMPER 97 <Z4RNDSH,Z4RNSHMDJ>
27	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
28	84-ZG1-259-010		SPR-P,WORM
29	84-ZG1-244-310		CABI,OPTICAL <EXCEPT Z4RNDSH,Z4RNSHMDJ>
29	84-ZG1-276-010		CABI,OPTICAL C<Z4RNDSH,Z4RNSHMDJ>
30	84-ZG1-261-010		LID,OPTICAL
31	84-ZG1-287-010		HLDR,MECHA NAT <EXCEPT Z3RDLSHJ,PZ3MD>
32	84-ZG1-286-010		CHAS,MECHA NAT <EXCEPT Z3RDLSHJ,PZ3MD>
A	87-067-703-010		TAPPING SCREW, BVT2+3-10 <Z3RDLSHJ,PZ3MD>
C	87-067-981-010		BVT2+3-6 BLK

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-2 E1)



CD MECHANISM PARTS LIST 1/1 (3ZG-2 E1)

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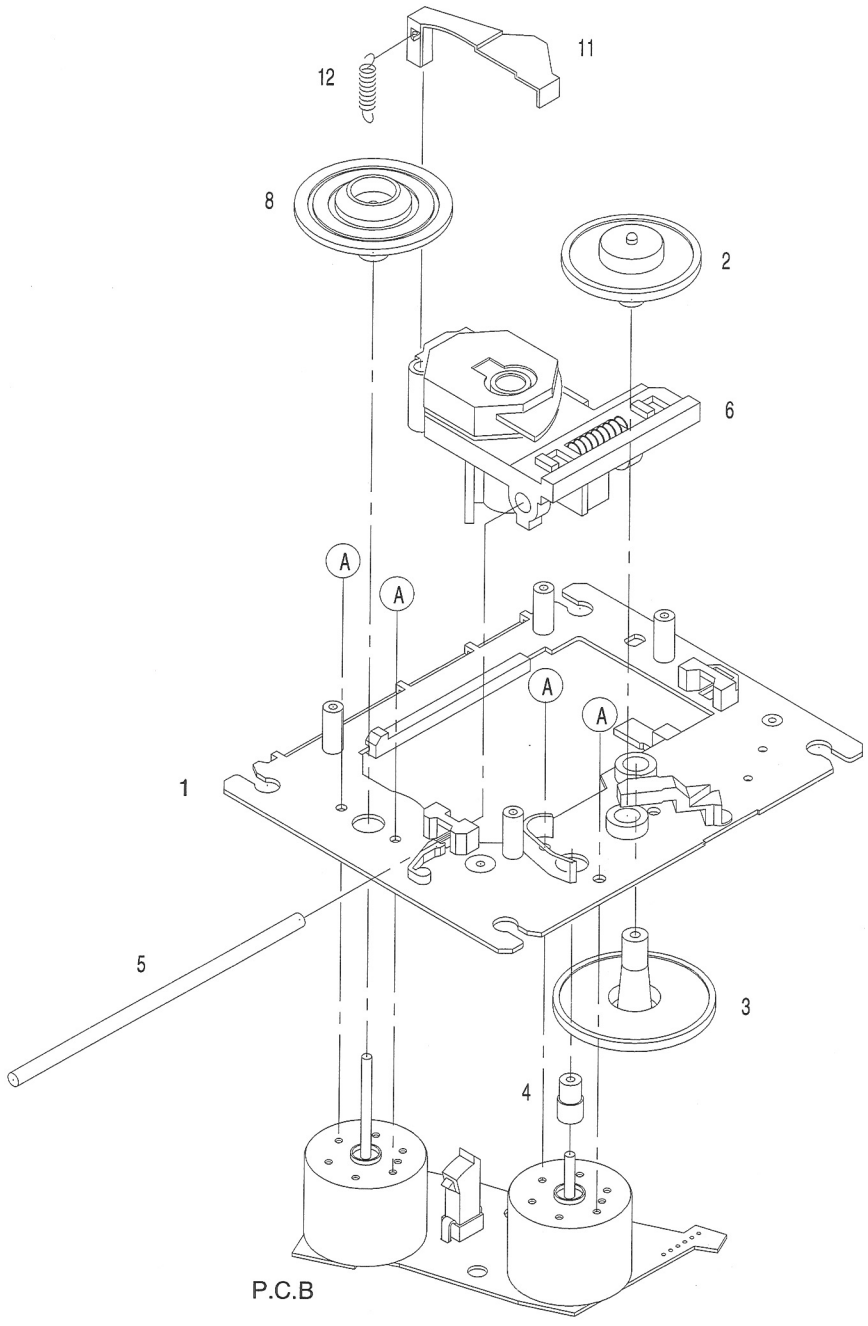
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY,SHT
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT,SLIDE 3
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-233-010		TURN TABLE,A5
11	83-ZG2-245-110		LEVER,SHUTTER
12	83-ZG2-250-010		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-2 E3)



CD MECHANISM PARTS LIST 1/1 (3ZG-2 E3)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-210		CHAS ASSY,SHT
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-253-010		SHAFT,SLIDE 5
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-227-210		TURN TABLE,C1
11	83-ZG2-245-410		LEVER,SHUTTER
12	83-ZG2-250-110		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

サービス技術ニュース	
番号	連絡内容
G一　一	
G一　一	
G一　一	

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